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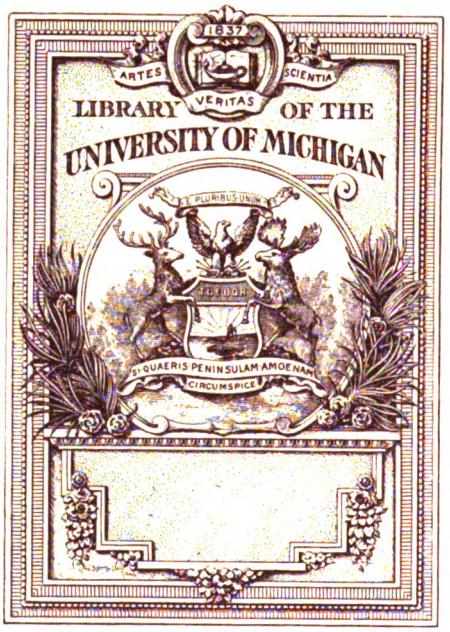

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THE MEDICAL FORTNIGHTLY

DEVOTED TO THE INTERESTS OF

THE GENERAL PRACTITIONER

EDITED BY

FRANK PARSONS NORBURY, M. D.
and THOS. A. HOPKINS, M. D.

VOLUMES XVII-XVIII
SAINT LOUIS
1900

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THE MEDICAL FORTNIGHTLY

1900

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The Medical Fortnightly.

Issued First and Fifteenth of Every Month by the Fortnightly Press Co.

UNDER THE EDITORIAL DIRECTION OF

FRANK PARSONS NORBURY, M. D. AND THOS. A. HOPKINS, M. D.

Secretary: CHARLES WOOD FASSETT.

A COSMOPOLITAN BIWEEKLY FOR THE GENERAL PRACTITIONER

Editorial Offices in St. Louis, Chicago, Cincinnati, Jacksonville, St. Joseph, Kansas City, and Pueblo, where specimen copies may be obtained and subscriptions will be taken.

Address all business communications to the Fortnightly Press Company.

Address all contributions and books for review to the Editors, Century Building, Saint Louis.

Volume XVII **JANUARY FIRST** **Number 1**

Editorial Department.

The Medical Anti's in Illinois.

THE NATIONAL ASSOCIATION OF LIBERAL PHYSICIANS AND SURGEONS recently convened in Chicago and had a merry pow-wow, a war dance, declaring in Aguinaldo style, that they were after blood. Not having blue-blood themselves, they being of the hazel-splitter variety of the genus, a sort of an off-colored irregular breed, they envy everything that is good, or resembles goodness. They are "agin the government style," and are "agin it," "dern it"—"agin it," "dern it" in everything they do. We suppose that paste diamonds and "dickies" figured in the "make-up" of these "savers of the people;" probably a few counterfeit green goods' mottoes are displayed in "well-filled wallets" to the edification of their emerald-hued patrons. They sham the art and science of medicine, and consequently not being the "real thing" they are "agin" the genuine, and believe in plate instead of the solid stuff. We would expect from such rank uncultured gentry such declarations as that Henry Wade Rogers, President of North-Western University, was in "educating a young man without much means," "putting an iron-band around the brow of the poor man's son." Bland, McDonald, DeBarth and others, alas, are samples of the degenerate element in our profession, and culture to them means oppression; all progress is but revolution and the swagger of assurance goes for knowledge with these iconoclasts.

The Anti's in Illinois are but parasites who would feed on public credulity, fatten on blatherskite practice, and then cry down with law—give us freedom! and let us have full sway, that we may, under the name of medicine, prostitute its tenets and trail in the mud its traditions and the honorable heritage of a noble profession. It is this discordant element in the profession that makes possible its kindred constitutional disharmonies osteopathy and christian science, and puts the flea in the ear of the legislature, and when it bites pours the oil of class legislation on the wound—murmurs oppression and opens the door for pernicious legislation.

Illinois needs a new law, and needs it badly, but with this one now on the books, the State Board of Health is keeping the Anti in submission, and we congratulate the efficient executive officer of this board on his vigilance

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and successful handling of the Bland element of discord, as found in Chicago. Secretary Egan is all right, but he labors under the disadvantage of trying to handle the wide-open christian science clause with kid gloves. When, indeed, it should be knocked out with knucks, if necessary. It is a death-dealing clause to innocent children, foolish old maids and presenile male dements, all of whom need the fostering care of the State Board of Health.

F. P. N.

Christian Science and the Law.

AT THE June meeting of the New York Medico-Legal Society, a paper was read (published in the *Medico-Legal Journal* of September) by Moritz Ellinger, Esq., on the above subject. He did not attempt to decide whether the belief was right or wrong, but dealt only with its legal aspect. Christian science is a misnomer. Science is not sectarian, but universal; it has to do only with the study of natural phenomena and is entirely independent of faith or religion. If a science is designated as Christian it must apply to dogma or creed, and this qualification is incompatible with the definition of science.

In this country every one is allowed to believe as he pleases, provided he does not interfere with the political, civic, and social rights of his neighbor, and does not endanger public health and morals. A medical practitioner must have a diploma, issued by a recognized scientific authority before he can practice. This is demanded in the interest of public health and morals. Christian scientists claim no knowledge of drugs or medicaments. Sickness is but imagination according to Mrs Eddy, and a careful reading of her "Bible" is of more use than the U. S. Pharmacopœia. Scarlet fever will yield to this treatment Mrs. Eddy thinks as well as measles or small-pox, or even cancer. "Whether prayer, incantation and persuasion is as effective as quinine, phenacetine and other anti-febrines in allaying fever, I am not competent to discuss." But the neglect of calling in a competent physician may endanger the health of the community, and it is just here that christian science comes into conflict with law. "Of course, everybody has a right to look upon matter as a mere reflection of spirit, and call in prayer-meetings as an adjunct to the remedies which the disbelieving doctor may prescribe, and he may have the right, which is very questionable, however, to expose the health and life of the members of his own family, but he has certainly no right to expose the health and life of other people to his peculiar belief."

The embarrassment in which the guardians of the law find themselves shows that there is a defect in our law dealing with this subject. The question should be considered without prejudice or bias, and a report made "of such measure or laws or amendments to the existing laws which would put an end to this homicidal freedom which endangers the lives of innocent children and ignorant dupes."

Howard Ellis, Esq., in the discussion of the above paper, said in brief: The law controls every matter in which the community is concerned, faith

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as well as science. A combination of faith and science, if practicable, though allied with force, cannot avoid the control of the law.

"Faith is that personal relation, in christianity, which the individual soul has to God." "Science is the ascertained relation of things material." From the nature of the two they cannot be united. Treatment, whether by medicament or otherwise, of a morbid physical condition is a process of physical cure; when undertaken for a fee it is practice.

It is claimed by christian scientists that the medical practice act does not cover their case. If in the law the words "practice of medicine" means only the prescription of drugs, then must a law be enacted defining the offences, the frightful outrages, leading even to the death of the victim of the christian scientists, and declaring the punishment. E. W. F.

Osteopathy Meets Defeat.

WE HAVE many times stated that osteopathy has no scientific basis for its universal claims, and have pointed out the fact that it is but a catch-dollar scheme conceived in iniquity, and born in sin, and lives on credulity. It is but one of the many schemes that have arisen since the days of the ancient oracles calculated to extort money from the lambs, who are only too willing to be shorn. It cannot stand investigation, and it lives simply because of the universal lack of scientific knowledge among the people, and because it has money to burn and to throw at the heads of the susceptible legislators and State officials, including some Governors, for their endorsement and legalizing power.

It cannot stand the light of truth, and Kentucky is the first State in the Union to say through its courts, that it cannot be recognized in that State, that it is not a science, and that its Mother House, at Kirksville, cannot meet the requirements as an educational institution worthy of place in which to teach the principles of a science. The following editorial from the *American Practitioner and News*, aptly gives the facts determining the quietus of osteopathy in Kentucky, viz.:

"NO MORE OSTEOPATHY IN KENTUCKY.

"The osteopaths in this State have put up a stubborn fight for the right to practice here. They have spared no means to secure their ends. Harry Nelson, an osteopath, entered a suit against the State Board of Health of Kentucky, in which he sought to enjoin the board from proceeding against him to prevent him from practicing medicine in Kentucky. He claimed to be a graduate of a reputable school, the Osteopathic Institution at Kirksville, Missouri. The State Board of Health denied the statement that the Kirksville institution was a reputable school of medicine, and were sustained in it by an elaborate opinion given in the Law and Equity Court of Jefferson County by its judge, the Honorable Sterling B. Toney. The judge held that

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there were only two points in the case to be decided—the constitutionality of the act to protect citizens from empiricism, and whether the Missouri college was a reputable institution, a question af fact.

"The matter of its being a reputable medical college was thoroughly investigated by a committee appointed by the Kentucky State Board of Health, composed of Dr. J. M. Bodine, Dr. George W. Griffiiths, and Dr. H. A. Cottell, of this city, who visited Kirksville and made a thorough personal investigation, and in their report to the board stated that the school was not reputable.

"The school has been investigated by other members of the profession, who fully concur with the report of the committee mentioned above in its report. There can be no doubt that they have a good building and have spent much money in the hope of deceiving the public, but it will do them no good in this State. The law is plain, and the judge has so stated the fact in his decision.

"Judge Toney declares in his decision that the action of the State Board of Health in all such cases as Nelson's is final and conclusive, and not a matter for a judge or jury to pass on.

"The following is an abstract of Judge Toney's opinion :

"As to the first question, Judge Toney held that the act was constitutional, quoting a number of State and Federal decisions in support of his position. As to the second, whether or not the Missouri institution was a reputable medical college, one of good standing, he ruled that this was a question of fact to be decided by the State Board of Health ; that that board had instituted a careful investigation of this matter appointing a special committee to do this, and as a result of this investigation it had decided that the Missouri school was not a reputable medical college, although legally chartered under the laws of that State. The board's decision on this question of fact Judge Toney held was final and conclusive, and was not a matter for a judge or jury to pass on. The injunction was refused and petition dismissed."

Poor old Missouri ! must "grin and bear" the disgrace of harboring within its borders such a school, which, as shown by the Kentucky court, is not a reputable institution. Again, Illinois, Iowa and a few other politician-burdened States have been worshipping this "old brass calf," by burning incense at its altar, and incidentally "accepting the price" for a license for its existence in these States. But Kentucky, the State which believes in purity in politics and wholesome public health regulations, has now set the example, and may others see the light and follow it.

F. P. N.

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DR. O. SUTTER has opened a down-town office in the Century building. And we notice that the Carlton building now numbers Dr. M. A. Goldstein, editor of the *Laryngoscope*, among its tenants. Dr. Goldstein still continues his west-end office at his residence, 3702 Olive street.

THE ANNUAL season of rumors of journalistic ventures is with us again, as usual St. Louis is the field of opportunity, as seen by several. We are told that no less than three new journals will be born in St. Louis in the very near future, and the situation is pregnant with further possibilities. There must be money in medical journalism!

ST. LOUIS MEDICAL SOCIETY.—At the annual meeting of the St. Louis Medical Society, December 30th, the following officers were elected for 1900: President, Dr. Robert Funkhouser; Vice-President, Dr. F. L. Henderson; Corresponding Secretary, Dr. H. A. Geitz; Recording Secretary, Dr. C. R. Dudley; Treasurer, Dr. A. R. Kieffer. The list is one of great satisfaction to the society, and indicates a strong administration during the coming year.

THERE is a nice little distinction between the words "physician" and "doctor," which the average physician fails to appreciate, and as a consequence the public does likewise. That there is more dignity in the use of physician in almost all places where the desired term is a noun will be apparent, if you will answer the question, "What is your occupation?" using each word in the answer. Dr. Smith may say, "I am a doctor," but it unquestionably would sound better did he say, "I am a physician." In its medical sense "doctor" is an excellent adjective, but a poor noun.

THE WESTERN SURGICAL AND GYNECOLOGICAL ASSOCIATION, comprising the States of Illinois, Wisconsin, Minnesota, Missouri, Indiana, Iowa and Kansas, closed its convention December 28th, 1899, by electing C. Beverly Campbell, of St. Joseph, Mo., President; A. C. Bernays, of St. Louis, Vice-President; J. R. Hollowbush, of Rock Island, Ill., second Vice-President; Geo. H. Simmons, of Chicago, Secretary-Treasurer. The executive board consists of Dr. Crowell of Kansas City, Dr. Lewis Schooler of Des Moines, Dr. Prentiss of Omaha and Dr. Moor of Minneapolis. The next meeting will be held in Minneapolis in 1900.

DR. E. R. AXTELL, of Denver, editor of the *Colorado Medical Journal*, and one of the leading practitioners of Denver, died December 15th. His death is a sad loss to the profession of Denver and to medical journalism in the West. In respect to his memory and the position he occupied, his funeral was attended by the medical societies of Denver in a body, while several physicians on this occasion spoke feelingly of the departed. Dr. Eskridge said in part: "It is always a painful duty to pay one's last respects to a departed friend. That duty is doubly hard, and the feelings of anguish and sorrow are doubly acute when that friend is as near and dear to me as a brother. Dr. Axtell lived a useful life, and showed us how much a manly man can do. His life has many lessons for us all. His friends in general will respect his memory and mourn the loss caused by his death. To his intimate friends, who knew all sides of his genial, and goodly nature, there was, there is, there cannot be a kindlier, gentler, truer, purer friend." The remains were taken to Cincinnati, Ohio, for cremation.

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The Reviewer's Table.

Books, Reprints, and Instruments for this department, should be sent to the Editors, St. Louis

A PRACTICAL HANDBOOK ON THE MUSCULAR ANOMALIES OF THE EYE—By. HOWARD F. HANSELL, A. M., M. D., Clinical Professor Ophthalmology, Jefferson Medical College, Philadelphia, and WENDELL REBER, M. D., Instructor in Ophthalmology, Philadelphia Polyclinic. 28 illustrations and 1 plate. Philadelphia: P. BLAKISTON'S SON & CO., 1899.

THE subject of muscular anomalies of the eye and their relation to headaches and various other nervous phenomenon, is one of great importance. As this is a comparatively new field of research, we welcome this small volume, which gives in a clear and concise way the various tests which will enable us to treat intelligently this class of cases.

J. E. J.

TREATISE ON SURGERY—By American Authors. Edited by ROSWELL PARK, M. D., Professor of Surgery in the University of Buffalo, N. Y. New, condensed edition, in one royal octavo volume of 1,262 pages, with 625 engravings and 37 full-page plates in colors and monochrome. Cloth, $6, net; leather, $7, net. Philadelphia and New York: LEA BROTHERS & CO.

THE two-volume edition of Park's Surgery is one of the best works on surgery ever published, and the present condensed edition seems to possess the same happy characteristics. That two editions of a work should be simultaneously extant is a novelty worthy of comment. Practitioners and many students desiring the fuller information in the two-volume edition will naturally prefer it, but the condensed edition maintains the convenient division into General and Special Surgery, and thus preserves the conformity of the work with the surgical courses rapidly becoming universal, and it will answer the needs of students as well as of those who desire a comprehensive and practical single-volume work on the subject. The reduction price is proportionately much greater than the reduction in matter, and is an advantage which purchasers will appreciate, and one which has only been rendered possible by the exceedingly wide sale already achieved. It is a pleasure to recommend a work which is so eminently practical.

SAUNDERS' QUESTION-COMPENDS NO. 4. ESSENTIALS OF MEDICAL CHEMISTRY, ORGANIC AND INORGANIC. Containing also questions of medical physics, chemical philosophy, analytical processes, toxicology, etc. Prepared especially for students of medicine. By LAWRENCE WOLFF, M. D. Philadelphia: W. B. SAUNDERS, publisher. Price $1.00 net.

THE fact that over 175,000 copies of these compends have been sold is sufficient proof that they have answered the purpose intended—a self-help for students preparing for examination. This, the fifth edition of this number, has been thoroughly revised by Smith Ely Jelliffe, M. D., of New York, the chapters on physiology and chemistry being considerably modified and enlarged to keep pace with the rapid advance in this department. E.W.F.

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REFRACTION AND HOW TO REFRACT, including sections on Optics, Retinoscopy, the Fitting of Spectacles and Eyeglasses, etc., by JAMES THORINGTON, A. M., M. D., Adjunct Professor of Ophthalmology in the Philadelphia Polyclinic and College for Graduates in Medicine, etc., etc. Two hundred illustrations, thirteen of which are colored. Philadelphia: P. BLAKISTON'S SON & CO., 1012 Walnut Street. Price, $1.50; 1900.

THIS work of three hundred pages is designed for beginners in the study of ophthalmology, and especially for those who may have a limited knowledge of mathematics. The style is simple, clear and concise, and the material is arranged in a systematic and practical manner. Following the plan of his well-know work on Retinoscopy, each definition and subject to be discussed is indicated by bold faced type. The important subject of astigmatism, usually a bugbear to students, is well handled, and the original drawings are superior to any found in other text-books. The chapter on Muscles gives all the latest tests for insufficiencies, and in every respect is fully up-to-date. In chapter viii the various cycloplegics are described and many useful hints given as to the best way of employing them. The student will find chapter ix, How to Refract, and chapter x, Applied Refraction, particularly instructive. Much practical information is given, illustrated by full histories of the various phases of each form of refractive error. The book is well printed, and of the 200 illustrations used to elucidate the text nearly all are newly made, and were drawn or photographed by the author. As a whole this work is the most complete text-book on the subject of refraction published in this country.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE, by JAMES M. ANDERS, M. D., Ph. D., L. L. D., Professor of the Practice of Medicine and of Clinical Medicine in the Medico-Chirurgical College, Philadelphia; Attending Physician to the Medico-Chirurgical and Samaritan Hospitals, Philadelphia, etc. Illustrated. Third Edition, Revised. Published, 1899, by W. B. SAUNDERS, 925 Walnut St., Philadelphia; price, cloth, $5.50 net; Sheep or Half Morocco, $6.50 net.

IN THE two editions already in the hands of the profession Anders' Practice has established itself a great success and has insured a cordial welcome for this and all subsequent editions; the two editions were so speedily exhausted, and made so happy an impression, that the one before us is certain of a fate equally felicitous. The work of revision covers the correction and re-editing of the text and the rewriting of some portions of it, also the introduction of new matter necessary to the bringing of the book thoroughly up-to-date, all of which has been carefully and successfully done. In handling the subject-matter of the work the author has classified the diseases in a manner that at once strikes the reader as eminently practical and at the same time scientific. Under each head the use of italics and full face type emphasizes and aids in quickly grasping the more important points; the use of diagnostic and other tables is also of great assistance to the reader. The ground is very thoroughly covered under each disease, pathology and bacteriology being given due prominence, but by no means eclipsing the most approved methods of treatment, a matter in which the majority of readers feel an equal interest. The book is very handsomely gotten up, the illustrations are excellent, and, in fact, there seems to be nothing that can be said of it, except what is distinctly commendatory.

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THIS the third volume of Progressive Medicine, keeps up the excellent standard set by Dr. Hare when the first volume was issued. This number is replete with the recent advances of the special departments of medicine and surgery. It is becoming every physician in this day of rapid development in medicine to keep in touch with this progress. And as a means towards this desirable end Progressive Medicine stands without a peer. We predict for this volume a welcome from the student physician, who appreciates good literature, well edited and valuable in its intrinsic worth.

F. P. N.

PROGRESSIVE MEDICINE—Volume III. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 440 pages, 11 illustrations. Philadelphia and New York: LEA BROTHERS & CO.

SOME OF THE COLLABORATORS.

DISEASES OF THE THORAX AND ITS VISCERA, including the Heart, Lungs, and Blood Vessels—By WILLIAM EWART, M. D., F. R. C. P., Physician and Joint Lecturer on Medicine, St. George's Hospital, London.

DISEASES OF THE SKIN.—By HENRY W. STELWAGON, M. D., Clinical Professor of Diseases of the Skin, Jefferson Medical College, Philadelphia.

DISEASES OF THE NERVOUS SYSTEM—By WILLIAM G. SPILLER, M. D., Professor of Diseases of the Nervous System in the Philadelphia Polyclinic.

OBSTETRICS—By RICHARD NORRIS, M. D., Instructor in Obstetrics, University of Pennsylvania, Philadelphia.

THE author's aim in this work has been to reconcile the science of bacteriology with that of medicine and surgery, so that the application of bacteriological principles may explain related medical and surgical problems. We can say that he succeeded in doing so, and has also succeeded in giving to the student a good treatise upon elementary bacteriology with which he can learn to carry out bacteriological work as it arises in connection with clinical medicine. Not only is this important, that the student should learn to group his bacteriological knowledge with his medical work, but it also helps in a great measure to interest him in the pursuit of such knowledge. G.

BACTERIOLOGY IN MEDICINE AND SURGERY. A Practical Manual for Physicians, Health Officers and Students. By WILLIAM HALLOCK PARK, M. D., Associate Professor of Bacteriology and Hygiene, University and Bellevue Hospital Medical College, and Assistant Director of the Research Bacteriological Laboratories of the Department of Health, City of New York; assisted by A. R. GUERARD, M. D., Assistant Bacteriologist, Department of Health, City of New York. Illustrated with 87 engravings and 2 colored plates. New York and Philadelphia; LEA BROTHERS & CO.

THE aim of this book is to present to the student of medicine the facts which are necessary to a correct comprehension of the study of anatomy of the human body, i. e., a correct appreciation of the development of the human body in the embryonic period. In the past, several excellent treatises upon embryology have been written; they have been of great value to advanced workers and to desultory readers, but have proved of but little utility to the man for whom this book was especially compiled—the student of medicine—in the literal sense of the term. The book, while not extensive, covers the subject in a manner most approprlate, and we can say that its aim has been accomplished to a nicety. It will fill a "long-felt want."

G.

A TEXT-BOOK ON EMBRYOLOGY, FOR STUDENTS OF MEDICINE, by JOHN CLEMENT HEISLER, M. D., Professor of Anatomy in the Medico-Chirurgical College, Philadelphia. With 190 illustrations, 26 of them in colors. Philadelphia: W. B. SAUNDERS, 925 Walnut Street; 1899. Price, $2.50.

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THE HYMEN.

BY BYRON ROBINSON, B. S., M. D.,

CHICAGO, ILL.

Professor in Chicago Post-Graduate School of Gynecology and Abdominal Surgery; Professor of Gynecology in the Harvey Medical College and the Illinois Medical College.

THE HYMEN is an irregular muco-membranous fold of varied shape and size, which closes and fills to a more or less extent the vaginal orifice to which it is a guard. It is generally broader behind than before. It may be considered as the thinned out or elongated continuation of the posterior and lateral vaginal walls which projects forward and upward over the orificium vaginæ, partially or wholly closing it. To show that the hymen is a continuation of the posterior vaginal wall the rugæ vaginales and columnæ vaginales extend over the surface of the hymen. By forcing the finger in an infant's vagina from proximal to distal extremity, the hymen continues onward without interruption like a glove finger. The hymen shows itself first by excrescences of epithelia on the posterior vaginal wall. The proximal vaginal surfaces belong to the vaginal mucosa. The distal surface shades off into cutaneous surface. The hymen has certain terms applied to it, which indicate its form and condition.

The knowledge of the various forms of the hymen and its relation to sexual intercourse, marriage, parturition, gynecologic examinations and conditions, and medical jurisprudence is of considerable importance.

Like all mucous membranes, the hymen is more or less red, moist, soft, and possesses the capacity of vast distention without rupture, and a return to normal without losing its integrity. It is covered by flat epithelial layers.

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The hymen, quite vascular, contains nerves, stretches with slight pain, may persist up to first labor, and its condition is no sign of virginity. The hymen is vulval or vaginal in origin, analogous to the bulb of the male, and is involved in atresia of the vagina. The ducts of vulvo vaginal glands should open externally to the hymen. It is important medico-legally. It bears numerous papillæ, which contain vascular loops and nerves.

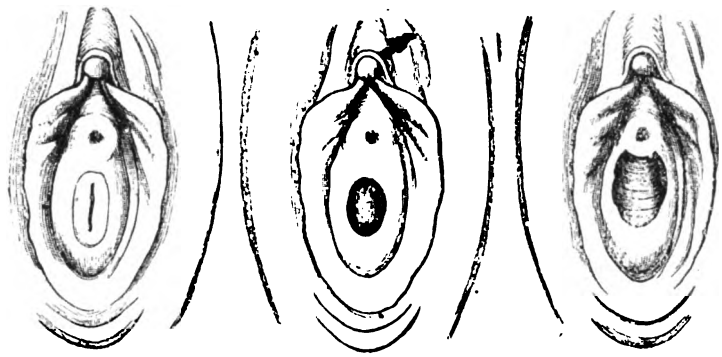

FIG. 1 (Hart and Barbour) represents three common forms of hymen. The first cut on the left represents the hymen of a nullipara (virgin). It is a vertical slit. The second cut represents a hymen with an oval aperture. The third cut represents a crescentric hymen.

The hymen has a fixed or attached border, which extends along the circumference of the vaginal orifice. It has a free or non-attached border, which projects into the orifice of the vagina. The border of the hymen is chiefly smooth. Occasionally one finds a sulcus nympho-hymenalis, which is a depression between the hymen and the labia minora. This occurs with

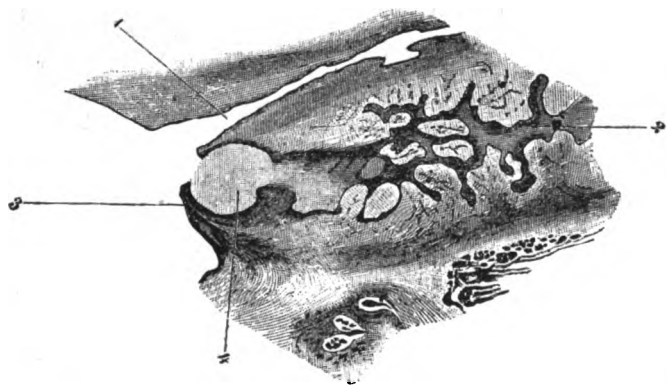

FIG. 2 (NAGEL). SAGITAL SECTION THROUGH THE DISTAL END OF THE VAGINA OF EMBRYO OF FIVE INCHES, TRUNK LENGTH.

1. Urethra. 2. Vagina with beginning rugæ. 3. Posterior border of the hymen. 4. Dilatation proximal to the hymen.

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a well-developed hymen. Rarely one observes fossæ nympho-hymenales, which are small, blind depressions, due to fragments of tissue extending from the hymen to the labia minora.

The following are some of the most important forms of the hymen recognized:

1. The hymen semi-lunaris is one in which the membrane assumes a half-moon shaped form. This is the most frequent form in which the concave free border of the hymen is turned toward the external urethral orifice.

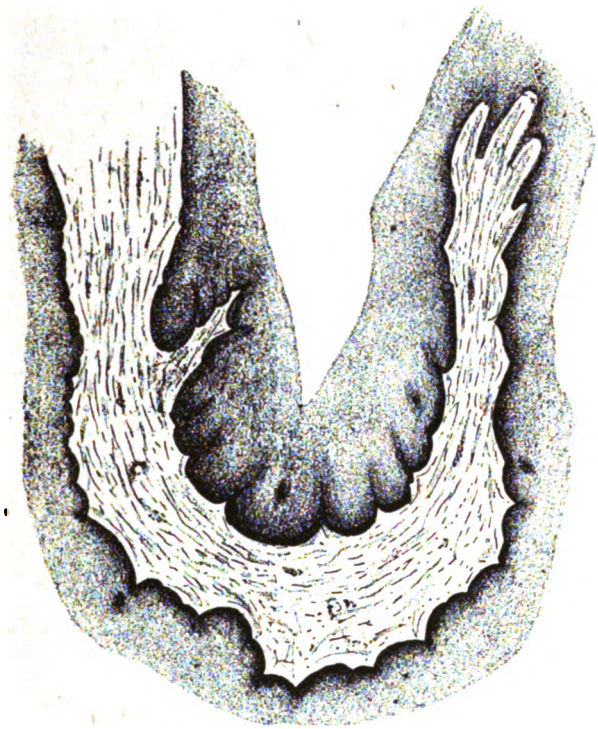

FIG. 3 (GEBHARDT). SECTION THROUGH A HYMEN.

The white connective tissue is covered on both sides by flat, squamous epithelia.

2. The hymen annularis is where the membrane grows from the entire circumference of the vaginal orifice, and passes a greater or lesser opening, which may be located central or non-central. In such case it represents a circular crescentric fold projecting into the orificum vaginæ.

3. The hymen fimbriatus represents the border of the hymen as irregular with serrated edges. Numerous tongue-like lobes project from its free circumference, resembling the comb of a cock. Its edges resemble the diminutive fringes of the abdominal end of the oviduct. A fimbriated hymen

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may be mistaken for a deflorated or ruptured one. ' The difference between the hymen fimbriatus and the deflorated or ruptured hymen, is in the first, the depression between any two fimbriæ does not extend to the margin of the orifice of the vagina, or to the fixed circumference of the hymen, while in the last the lacerations extend to the fixed or attached border of the hymen. The fimbriæ on the free border of the hymen vary in number and size and distance from each other.

4. The hymen imperferatus represents a condition where the distal end of the vagina is congenitally closed. There is no aperture in the hymen to permit discharges or penetrations. The mucous and menstrual discharges are retained. Imperforated hymen is generally discovered after one or several menstrual periods. It requires an incision to evacuate the blood, which should be assumed with the precaution of placing the patient in patient.

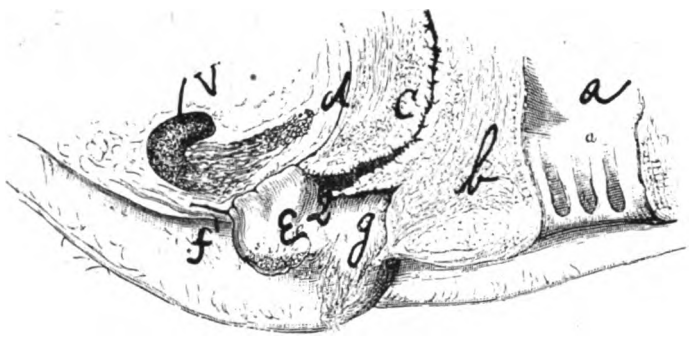

FIG. 4 (HENLE). REPRESENTS A VENTRICLE MESIAL SECTION OF THE EXTERNAL GENITALS.

2. Hymen. a, is the anus, showing its columns and sinuses. b, perineal body. c, vagina. g, fossa naviculoris, with hymen in front and Fourchette behind. E, latium minus. f, prepuce of clitoris. V, vaginal bulb. This hymen is rather well marked, as well as the naviculoris and Fourchette.

The remaining forms of the hymen are less frequent occurrence. The hymen carnosus, or fleshy hymen, consist of a strong, thick membrane, which may not only resist copulation, but be also a hindrance to parturition. This is the form of hymen in which first labor, a fine, small opening is discovered, explaining how pregnancy occurs. Besides, the strong, fleshy hymen belongs to those cases where, at copulation, the penis may assume the penetration of the rectal, but especially the urethral canal dilating it gradually to a large caliber.

The hymen cribriformis is where several apertures of various sizes exist in the membrane.

The hymen micro-perforatus has one small, fine, opening.

The hymen biperforatus possesses two apertures.

The hymen bilobatus consists of mainly a division into two lobes.

The hymen defloratus is considered one in which lacerations occur from copulation.

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The hymen justo minor consists of a small formed membrane, in which copulation, and even parturition, could occur without losing its integrity.

The lobuli hymenales is a condition whereby the lacerated membrane healed into the form of distinct lobes.

The hymen infundibuliformis represents a state where the two limbs of the half-moon shaped membrane come in contact, and project into the vestibulum vaginæ like a funnel.

The hymen columnatus is a condition where the posterior columnæ vaginæ extends over the posterior surface of the hymen.

The well developed hymen is nearly always more or less lacerated in the first complete copulation, and if the lacerations extend to the attached hymeneal border the hemorrhage may be considerable.

MACROSCOPICAL ANATOMY demonstrates the hymen as a crescentric fold located at the posterior part of the vaginal orifice. It is a mucous fold compressed laterally with its free edges directed downward, so that the opening is a verticle slit bordered by the lateral lips, and having its inner surfaces in close opposition.

It lies against the posterior vaginal wall "like a jib bellied by the wind." It does not appear tense, unless the thighs are separated as well as the labia.

The hymen offers little obstruction to penetration of the vagina, in fact often remains intact after repeated cohabitations. As a consequence of parturition, the line of demarkation between the vagina and vulva disappears, and later the orificum vaginæ is flush without the vulva.

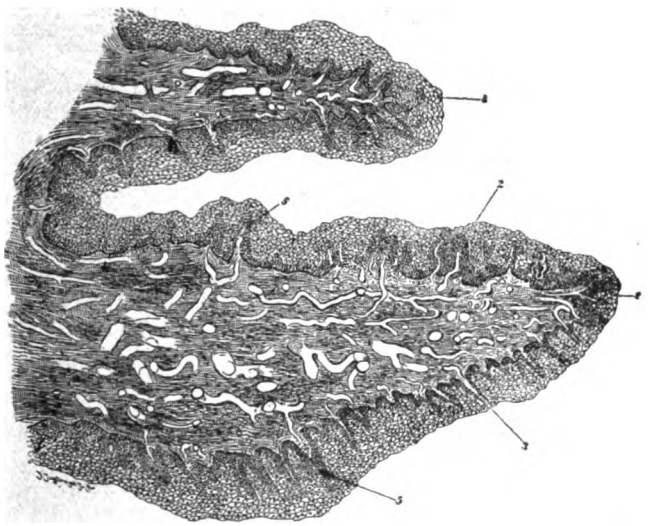

FIG. 5 (NAGEL) LONGITUDINAL SECTION THROUGH THE HYMEN OF A YOUNG PERSON.

1. Free border of the hymen covered with flat, squamous epithelia. 2. Vaginal surface of the hymen. 3. External surface, or the surface turned toward the fossa naviculoris. 4. Transverse fold of vagina. 5, 5. The papillæ projecting toward the surface of the hymen containing vessels and nerves. The central irregular, white spaces are veins.

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In general the hymen is triangular with its base against the posterior vaginal wall, and its apex is the free margin.

It appears as a double fold of mucous membrane with intervening connective tissue directly continuous with the vaginal wall. The blood vessels are derived from the vaginal wall.

The so-called trimming or removal of the carunculæ hymenales is almost always an unnecessary operation.

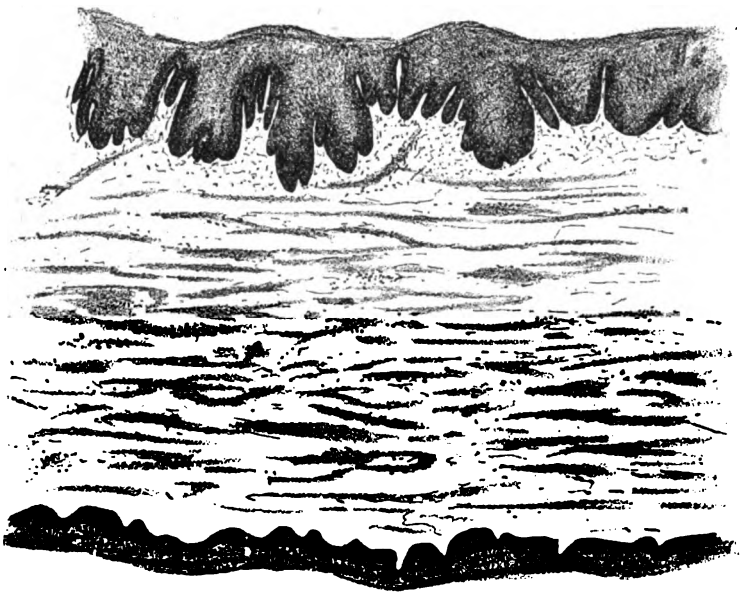

FIG. 6 (GEBHARDT). A SECTION OF THE CLOSING MEMBRANE OF A GEMATO-COLPES.

Flat, squamous, epithelia on both sides. The external layer (superior) is thicker than the internal layer (inferior) connective and elastic tissue intervenes.

MICROSCOPICAL ANATOMY reveals pavement or flat epithelium on the surface of the hymen. Subepithelial, there exists a network of fibrous, elastic tissue. There is little or no muscular fibres. Numerous papillæ extend from the central connective tissue into the epithelial structures bearing rich capillary vessels and nerves. Gland-like epithelial depressions exist on the hymen, which again indicate its analogy of structure to the vaginal mucosa.

After healing of the hymeneal lacerations subsequent to parturition the remnants of the hymen strongly shrink to irregular fleshy protuberences or wart-like processes, located along the circumference of the vaginal orifice. The rapid shrinking may be due to sloughing after labor.

The fringed hymeneal remnants are known as carunculæ hymenales (mytiformes). The carunculæ hymenales (post partum) are wider separ-

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ated than are the fimbriæ in the hymen fimbriatus (mullipara). It might be considered protective to a virgin who required a vaginal exploration to give her a certificate to the effect, that the hymen was lacerated during a vaginal examination.

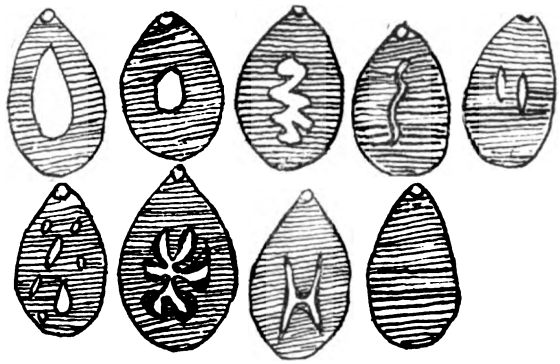

FIG. 7. A SCHEMATIC DRAWING TO REPRESENT THE VARIETIES OF THE HYMEN.

The first cut in the upper left hand corner represents the semilunar form of the hymen, one of the most common forms.
The second cut in the upper left hand corner represents the annular form, the next most common form.
The third cut represents the fimbriated hymen, with its irregular border.
The fourth cut represents a hymen with narrow slit, the linear hymen, whose free borders often project into the vulva, and the internal surfaces of the hymen lie in contact.
The fifth cut represents a hymen with septum. It has two openings or perforations.
The sixth cut in the lower left hand corner represents a cribriform hymen, with seven perforations of various sizes.
The seventh cut represents the fleshy hymen, resembling the hymen fimbriatus.
The eighth cut represents a hymen with two lobes, an upper and a lower hymen bilobatus.
The ninth cut represents an imperforate hymen.

THE DEVELOPMENT of the hymen indicate its signification. It is a remnant of a cloacal appendage. It should be traced through typical cloaca of fish, reptiles and birds, and finally through mammals.

Like the columnæ ani, semilunar valves and sinuses of the anus, the hymen has a varied existence as to size, shape and presence. In mammals its existence may be recognized by the transitional narrowing or constrictions between the vagina and the sinus urogenitalis. In human embryos of three months, a thickening and accumulation of epithelia on the posterior vaginal wall at the orificium vaginæ, occurs with the distal projection of the same, resulting in the hymen.

The growth, heaping up, of the epithelia at the distal end of the posterior wall in the rudimentary hymen rapidly progresses, and at the same time the rugæ vaginales also rapidly increase, until, in a six months' embryo, the rugæ extend from the portio vaginalis to the free or distal border of the hymen.

The frenum or transverse fold found at the vaginal orifice in many mammals, is the analogue of the human hymen.

There are two theories regarding the development of the hymen, viz., one, that it is from the posterior vaginal wall, and the other, that it is vulval in origin.

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PRACTICAL DEDUCTIONS indicate that the hymen presents numerous variations as to size, shape and distensibility. It is difficult in some subjects to make an intelligent examination of the hymen, unless the parts are relaxed, and this sometimes only possible under an anesthetic. With relaxed parts the great distensibility of the hymen becomes apparent. The presence or absence of the hymen is now considered of little importance medico legally, and no sign of virginity.

In rape, however, lacerated hymen becomes significant. A fimbriated hymen may simulate laceration. The presence of corunculæ hymenales have considerable signification as regards previous parturition. It is true, the corunculæ hymenales are not a sign of labor, but they are a strong symptom. The hymen shares in vaginal and vulval inflammations, and from the presence of nerves is sensitive. The diagnosis of imperforate hymen should be made with caution, as it is easy to overlook minute openings, which have permitted discharges and penetration of semen.

FIG. 8 (DORAN). HYMEN BISEPTUS.

The blunt ends of the porteno labia majora do not unite. Note the rugans condition of the parts about the vestibule. This is the vulva of a young person.

The newly married woman frequently suffers severe pain from the lacerated, defiorated hymen, and especially on repeated copulation. At the first copulation, and for some time subsequently, the woman should apply sweet or olive oil to the vulva and introitus vagina previous to copulation. The man should oil the glans penis. This simple precaution often avoids considerable mental and physical suffering.

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The well developed hymen is more or less ruptured at the first complete copulation. The hemorrhage at first copulation is nearly always due to rupture of the hymen. Should hemorrhage require arrest, either pressure or a ligature passed about the bleeding point by the aid of a curved needle will suffice.

The hymen and orificium vaginæ are one and the same.

The hymen semilunaris is the most frequent and important form. The other forms are rare and of little practical significance.

Imperforate hymen retaining blood and discharges should be incised, after which the patient should remain in bed.

A Peculiar Case of Poisoning by Potassium Iodide.

BY E. A. CRAIN, M. D.,

MISSOULA, MONT.

MR. A., a chronic user of morphine to the extent of grs. iiss per day by the mouth, suffering from nerve pains in the chest, with palpitation of the heart when the stimulating effect of the morphine was absent. Was advised to take potassium iodide, grs. viiss, three times a day. He procured the medicine at 5.30 P. M. took one dose, as the pains were annoying, at 7 P. M. another, which quieted the pains. He was so much pleased with the effect, that at 8.30 he took the third dose, making 22½ grains taken in three hours, the last dose taken with the idea of being free from the pains during the night. At 10.30 he began to have an uneasy feeling in the mouth, simulating toothache in upper jaw, although he had no upper teeth, they being replaced by a rubber plate. He thought he might have failed to keep his plate absolutely clean, so took it out. The pains increased, and at 11.30 he was suffering every symptom, intensely, of severe influenza, as they appear in the mucous membrane of the head. His pulse was slowed to 40, respiration 10, and sighing pain in nose, mouth, throat and ears intense. By using cocain in eyes and nose, hot water in profusion and constantly, and morphia sulph. as freely as I dared to do, giving three-fourths of a grain hypodermically, and grains two and a half by mouth during the interval between 11.30 P. M. and 5 A. M. I succeeded in quieting him so he rested until 8 A. M. He also had one-half pint of old whiskey as a stimulant during the time. When he awoke at 8 A. M., he had no pain, but his eyes were swollen and protruding, eyelids enormously œdematous, and face much swollen. The metallic taste was pronounced, even to the second day. Was it due to the fact that the secretions were locked up by the morphia, so the elimination of the iodide was slow, or was it an idiosyncracy against the iodide?

Higgins Block.

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Nosophen—Its Use in Neglected Chancroidal Adenitis.

BY T. A. HOPKINS, M. D.

ST. LOUIS.

THERE is no place where the real value of an antiseptic will be more clearly demonstrated than in combatting chancroidal processes. Iodoform, so long associated with the treatment of these conditions, and considered the superlative of antiseptic dressing powders, has, during recent years, been rapidly retired until it now occupies hardly a comparative position. We hear less and less of the antiseptic "better than iodoform," in fact, two groups of antiseptics have arisen, the individuals of which so far surpass iodoform that it is practically out of the race. Of these groups the first includes all preparations formed with iodine as a base, iodoform being a member of the group; the second includes a vast array of products, each to some extent useful, some of them decidedly so, but as a class unquestionably inferior to the iodine compounds.

The class containing iodine is not composed entirely of successes. On the contrary, many and great have been the disappointments following the use of some of its members. We seem prone to expsct too much even of the best, then, too, a dressing is too often called upon to combat not alone the original diseased condition, but various surgical sins of the operator as well. It is always well to be certain that our technique has been reasonably cleanly before passing adverse judgment on a product. But we are wise in pinning our faith to the iodine group in the mazes of which can be found much which is really satisfactory. The newer compounds are largely responsible for the good repute of the group and Nosophen stands among the foremost of these.

Nosophen has already been very thoroughly introduced to the profession, but a brief resume is excusable as the subject is important and not all the profession are familiar with this agent.

Tetra-iodo-phenol-phtalein, or, by courtesy, nosophen, is a very light and impalpable, yellowish-grey, tasteless powder containing 61.7 per cent of iodine in combination. Its odor is very slight and not at all unpleasant, It is obtained by the action of iodine on phenolphtalein. It is not affected by heat up to 220° C., it melts at 255° C., giving off iodine vapor. It is insoluble in water and acids, and but slightly soluble in alcohol, ether and chloroform. In the alkalies it is very soluble, and from the alkaline solutions the salts of nosophen may be easily freed at a low temperature by carbonic acid. The sodium and bismuth salts, so produced, have been placed on the market. The former is a dark blue powder which is very soluble in water and alcohol, when exposed to action of carbonic acid it is transformed into nosophen and carbonate of soda. This property and its solubility make it a very useful companion of nosophen. The bismuth salt does not concern us at this time.

Clinical experience with nosophen and its salts has been very flattering in all departments of surgical work, but especially so in venereal and geni-

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to urinary practice, where the test is unquestionably severe. Having strong bactericidal characteristics, being unirritating and nontoxic, and being to a certain extent anasthetic, astringent and haemostatic in its action, it naturally appeals to the doctor. Add to this the fact that it is almost odorless and you will find that it appeals to the patient as well. In healthy surgical wounds and non-infected injuries it is an entirely satisfactory dressing, but it best shows its strong points when brought to bear on infected surfaces. In a very interesting paper* on the rapid treatment of chancroid, Ohmann-Dumesnil, of this city, has shown that it very materially shortens the life of these distressing sores and obviates complications and sequallae very frequently. My own experience entirely agrees with that of the writer, as does that of a constantly increasing number of clinicians. In addition to his treatment, which consists of cleansing with hydrozone and dressing with nosophen, the use of an antinosine wash varying in strength from 1 per cent up to 3 and 4 per cent will be found advantageous. In the post-operative treatment of neglected chancroidal adenitis, it will be found equally useful. These cases usually come to the surgeon when "adentis" has ceased to describe the situation, for the glands are already almost if not quite destroyed and we have in reality to deal with inguinul pockets filled with chancrodial pus. That primary union is out of the question, is patent. We must deal with fact rather than theory, more time will be made by opening freely and dealing with it as we would with a chancroid elsewhere, than by attempting to cleanse and close with a hope of no further trouble, the latter course is almost never a success.

While the local treatment is the feature in these cases, a general house cleaning is of almost equal importance. The system is poisoned and before operating, or at the time of operation, a system of renovation should be inaugarated, all channels of excretion should be open, but especially the bowels; dyspepsia and constipation are almost invariably present in these cases. A rather generous dose of salts to open the way and the persistent use of a mild laxative for some days will work wonders. Cascara is eminently fitted for use here, and if given in combination with maltine, all indications for internal medication will have been met, in so far as the alimentary cause is concerned. This combination masks the characteristic bitter taste of cascara, and if given in small doses, will keep the bowels open and that without any disagreeable features. The quantity of maltine in it is too small to show much of its characteristic and happy effect, still that it aids digestion, stimulates the appetite and is nourishing, will be evident even from these small doses. Should a more decided action in these regards be indicated, and it often is, plain maltine or maltine with pepsin may be given simultaneously.

The operative technique in these case is very simple, the abscess should be opened very freely, curettement should be thorough, and the wound carefully cleansed; the use of antinosine solutions brings its antiseptic principle, nosophen, to bear on pockets and obscure points where the powder, if used alone, might fail to reach, In dressing the wound nos-

*St. Louis Medical and Surgical Journal, June, 1898.

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ophen is dusted into and over it, about half the quantity of this powder being used that would be thought necessary were some other selected. The usual dressings (gauze, cotton and bandage) are then applied. The beauty of this treatment will be apparent on the first removal of the dressing, the wound will be found sweet and clean, comparatively free from pus, and already showing evidence that healing is under way. The speedy subsidence of pain and all the more prominent subjective symptoms lessens the time of necessary confinement, and allows the patient to resume his duties with little delay and little inconvenience. Dressings are to be renewed every second or third day, as indicated. Not infrequently all signs of infection will disappear after the first or second dressing; of all the cases under my observation in none has there been persistent pus formation, and in spite of past neglect healing has commenced with the beginning of the treatment.

The strong point of this treatment is that the recovery is rapid, the long-drawn-out cases, those which haunt the doctor's office for weeks and months have not been given the benefit of this antiseptic. Nosophen not only reduces the time-limit by about half, but also insures an uneventful recovery, this is a record that justifies enthusiasm, and fully explains the fact that it is fast superseding other antiseptic powders. There is no contraindication to its use, and everything in its favor, that it needs the assistance of a rational oversight of systemic conditions is true, it is unfortunately a fact that local measures are too often compelled to work alone, and as a result many a valuable agent is condemned as unable to do what has been claimed for it. It is surprising how irrational it is possible to be sometimes.

SUBSTITUTION.—We have been told that there is in this city a manufacturing house which is supplying the drug trade with drugs and chemicals built on a plan to make it possible to substitute for almost any product, whether it be proprietary or other. In fact, it seems to be their object to encourage substitution and that in its worst form, while the crime is left to the man of drugs the temptation comes from this house as it never has from another. In selling to the trade they are careful to protect themselves, they have names of their own for all of their products, but the customer is told that various of them are each exactly the same thing as the corresponding individuals of a list of the most popular and reliable proprietaries; the price is about one-half that asked for the proprietary, and in some instances less than it is possible to buy the crude drugs entering into the composition of the reliable preparation. It is no joke to practice medicine at the best, but the pleasure is entirely taken away if we cannot feel certain that our patients are getting just what we prescribe. The physician owes it to himself and to his patients to cultivate an acquaintance with the bottles on the druggist's shelves and behind the compounding counter; if he finds the store stocked with inferior goods his reputation and success in practice demands that he see that no more of his formulas go there. What applies to proprietaries applies equally to official drugs, such a concern should not be allowed to make the ingredients of horse medicine.

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Correspondence.

SOROSIS OF THE LIVER.

TO THE EDITOR OF THE FORTNIGHTLY:

Sir:—I find in an evening paper of this city the following: "Charles Stewart Draper, one of the 405 cabin passengers on the steamship Colombia, which arrived from Hamburg today, died during the voyage of sorosis of the liver."

I have been greatly exercised in mind since I read that clipping. Is it possible that a new disease, even one that may end fatally, has been discovered of late, and the name of that eminently respectable association of ladies, called the Sorosis, has been given to it? That would be nothing less than an outrage.

Allow me as a well wisher of the daily newspaper, to give ye editor a piece of advice: Never to publish anything about cholera, or any other disease, endemic, epidemic or pandemic, that does not come from a physician. He will then not be exposed to be laughed at for speaking of the "yellow fever on the banks of that grand old Hindu river, the Ganges," as he did recently, or for making people die of diseases that never existed. Sorosis indeed! what would the ladies of that association say?

DR. PARTINGTON.

Park Row, New York.

DO DOCTORS READ THE ADVERTISING PAGES?

LIBERTYVILLE, MO., December 9, 1899.

EDITOR MEDICAL FORTNIGHTLY, St. Louis, Mo.:

Dear Doctor:—Enclosed please find two dollars ($2) for renewal of my subscription to the FORTNIGHTLY. Having noticed your advertisement in regard to errors in your magazine, I would say, that after a careful examination of the advertising, I have to report the following errors, viz.:

The Illustrated Medical Journal Co. on page 2, "i" in place of "l" in "lists" and the "e" omitted in "syringes"

The Tilden Co., on page 7, "t" inverted in "elegant."

Chas. N. Crittenton Co., page 30, "l" instead of "i" in "oil."

Henry Pharmacal Co., page 5, superfluous "u" in "nausea."

Hoping that I am in time to win the prize, above is respectfully submitted. Yours very truly,

G. B. PERKINS, M. D.

[Dr. Perkins wins a prize, although two of the errors he quotes occur in electrotype plates furnished by the advertiser, viz.: Crittenton and Henry Pharmacal Co.

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A NEW METHOD OF TREATMENT FOR GONORRHEA.

PARIS, December 1, 1899.

EDITOR MEDICAL FORTNIGHTLY:

In acute gonorrhea the treatment by "lavages," or irrigation with a solution of permanganate of potash as practiced by the school of Guyon, has dethroned all other therapeutic measures. To be efficacious this irrigation or flushing of the urethra must be thorough, and it is rarely well executed by the patient himself. Urethral syringes are rarely of sufficient capacity to readily reach the posterior urethra, and the irrigator is always too cumbersome to be readily handled. I have obtained the best results with the following apparatus, which recommends itself by its simplicity.

To an ordinary Politzer pear-shaped rubber bag it is easy to adapt an olive-shaped glass nozzle, such as is used with the Guyon syringe. This transformation is readily effected. The volume of the rubber pear may vary from four to sixth ounces. In using the pear it should be filled with a $\frac{1}{2000}$ to $\frac{1}{4000}$ solution of permanganate of potash. The patient first flushes out the anterior urethra without obstructing the meatus to clean out the secretions, then making a firm pressure with the nozzle against the meatus, as great a quantity as possible of the liquid is forced into the urethra as far back as the bladder. Now, as the pear may be alternately dilated and compressed a double current is produced which flushes the urethra out thoroughly, and brings the remedy in contact with all its parts. In this way 4 to 6 ℥ of liquid correspond as to efficacity to several quarts when used with the irrigator. I have obtained such excellent results with this method, that I feel it my duty to call it to the attention of the medical profession.

EDMUND L. GROS, M. D.

18 rue Clement Marot.

Bronchitis.—

℞ Terpinol.....
Sodi benzoatis.....aa gr. ii
Sant. albi.....q. s. et ft. pil. No. 1

Sig.: Take six to twelve per day.—*Med. Review of Reviews.*

Nasal Catarrh.—One of the best alkaline, detergent and dissolvent solutions is the following:

℞ Bicarbonate of sodium..... 5 grains
Biborate of Sodium..... 6 grains
Chlorate of sodium..... 6 grains
Bicarbonate of potassium..... 6 grains
Distilled water..... 1 fluidounce

An excellent solution to allay irritation following operations and in acute inflammations is equal parts of the aqueous extract of hamamelis and distilled water, used at a temperature as high as can comfortably be borne. The alkaline solution should be used only in chronic conditions.—*Kylr Internal. Med. Mag.*

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Reports on Progress.

COMPRISING THE REGULAR CONTRIBUTORS OF THE FORTNIGHTLY DEPARTMENT STAFF

GENERAL SURGERY.—C. E. Black, M. D., Jacksonville, Ill.
DISEASES OF THE CHEST—W. W. Bulette, M. D., Pueblo, Colo.
INTESTINAL AND RECTAL SURGERY—S. G. Gant, M. D., New York City.
DISEASES OF THE MIND—Frank C. Hoyt, M. D.
RHINOLOGY AND LARYNGOLOGY—John A. James James, M. D.
GENITO-URINARY SURGERY AND SYPHILOLOGY — Bransford Lewis, M. D.
OPHTHALMOLOGY—J. Ellis Jennings, M. D.
ORTHOPEDIC SURGERY — Phil. Hoffman, M. D.
GYNECOLOGY—Josephine Milligan, M. D., Jacksonville, Ill.
OBSTETRICS—R. B. Murphy, M. D.
MEDICINE — Frank Parsons Norbury, M. D.
CLIMATOLOGY—Hubert Work, M. D., Pueblo, Colo.
PATHOLOGY AND BACTERIOLOGY—Rutherford Gradwohl, M. D.
PARIS CORRESPONDENT — Thomas Linn, M. D., Paris, France.
NEW YORK CORRESPONDENT -- E. Franklin Smith, M. D.
LONDON CORRESPONDENT — R. T. Hewlettt, M. D., M. R. C. P., Chief Bacteriological Laboratory, Jenner Institute of Preventive Medicine, London.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF R. B. H. GRADWOHL, M. D.,

ST. LOUIS, MO.

Epidemic Cerebro-Spinal Meningitis.—J. P. Ferguson (*Louisville Med. Monthly*, July, 1899) reviews the subject of spotted fever, and discusses etiology, pathology, symptomatology and treatment of this condition. He points out the value of opium in the treatment of this affection, together with mercury and iodides later on in the disease when convalescence has set in. The subject of Crede's antiseptic ointment in the treatment of this affection is given notice, but no results are reported, as the writer had no practical experience with it.

A New Micrococcus in Endocarditis.—MacCallum and Hastings (*Centralblatt fur Bakteriologie u. Parasitenmunde- Modern Medicine*, August, 1899) describe a new micrococcus which they name micrococcus symogene, isolated from the blood during life and from septic infarctions of the aortic valves after death in a case of acute endocarditis in a man aged thirty-seven years. The morphology is that of a micrococcus, resembling when grown on gelatin the pneumococcus. It stains by Gram's method, liquifies gelatin and peptonizes milk, after having rendered it acid, and coagulated it. The organism is pathogenic for rabbits, dogs, and white mice. The lesions in the dog, following experimental inoculation, were strikingly like those in man. Venous injection of the micro-organism set up a septic endocarditis with aortic involvement, from which the organism was recovered. In man, as in the animals used for inoculation, the organism was found throughout the organs of the body.

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Earth Odor Due to Bacteria.—According to Nuttall (*Knowledge; Gaz. deoli ospedali—Modern Medicine*) the odor observed in overturned earth is due to the micro-organism cladothrix odoriferi. Nuttall has isolated this organism, and finds that it produces a substance with the characteristic earth odor.

A New Method of Differentiating between the Bacillus Coli Communis and the Bacillus Typhosus.—Jamieson noticed that in most cases of fetid urine the organism present was the colon bacillus. From this he reasoned that if tubes of sterilized urine are inoculated with typhoid and colon bacilli, the tube inoculated with bacillus coli communis will undergo ammoniacal decomposition, while that inoculated with the typhoid will remain unchanged for several weeks.

The Value of the Leucocyte Count in Appendicitis.—Head (*The Medical Dial*, September, 1899) says that the value of the leucocyte count in appendicitis is, first, as an aid in the diagnosis of the disease; second, as a means of determining the character of the inflammation, whether catarrhal or suppurative; and third, as a help to the clinician in following the course of the appendicitis from day to day, of determining whether the inflammatory process is extending and involving new areas, or receding and going on to resolution. The leucocyte count in typhoid fever is normal or diminished, while in appendicitis it is increased. The writer advises making the count in every case where doubt exists as to the diagnosis.

Four Cases of Carcinoma of the Breast Treated by the Cataphoric Method.—Massey (*The Penna. Med. Jour.*, September, 1899) reports four successful cases of carcinoma of the breast treated by the cataphoric method. The object of the method is the complete and immediate destruction of the malignant cells or germs, both within the tumor and in the surrounding parts, the destructive agency being nascent mercuric and zinc oxychlorides developed within the growth by a powerful electric current, the patient being under an anesthetic. These substances are developed by electrolysis from metallic mercury and zinc inserted into the tumor, the pure mercuric salt requiring the use of a gold electrode to diffuse it. The result is a radiation of these powerful protoplasmic poisons by cataphoresis in all directions from the electrode. A grayish area of necrosis follow, with the formation of a line of demarcation and a new growth of opposing healthy tissue encompassing the area of necrosis.

Correction.—On page 740 of our last number there appeared a formula under the heading, "Suppositories for Cystitis," in which the principal ingredients were transposed, as must have been apparent to most of our readers. The formula should have read:

℞ Extract of belladonna.....
Extract of opium.....aa gr. ¾
Iodoform..... gr. xv
Virgin wax..... gr. xv
Cocoa butter..... gr. xlv

M. S. Make one suppository.

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MEDICINE.

BY FRANK PARSONS NORBURY, M. D.

Physician to Oak Lawn Sanitarium; Neurologist to Our Savior's Hospital; Physician to Passavant Memorial Hospital,

AND EGBERT W. FELL, B. S..

JACKSONVILLE, ILL.

The Diagnostic Value of Gall-Stone Crepitus and Friction.— Dr. J. M. Anders presented a paper at the meeting of the Philadelphia County Medical Society (*Medical News*, October 28, 1899) arguing that this sign was valuable, especially in atypical cases, in which the diagnosis was rendered difficult by the absence of clinical symptoms, save, perhaps, jaundice, caused by obstruction of the common duct. In such cases the condition may frequently be recognized by detecting by simple or ausculatory palpation a friction and crepitus over the site of the lesion,

The Arid Region of the United States for Pulmonary Tuberculosis. —Dr. J. O. Cobb in the *Medical News* of October 21, 1899, says that for acute cases any one place in Arizona, Colorado, New Mexico, Mexico or Western Texas above 3,000 feet elevation is as good as another. He warns against infected rooms, and emphasizes the importance of a proper disposal of sputum. The places mostly frequented range between 2000 and 7000 feet altitude. Patients with valvular lesion with stenosis get along well in high altitudes. Tubercular pneumonias and pulmonary hemorrhages probably occur more frequently in a very high altitude. Consumptives with large cavities should not go above 5000 feet. An altitude above 3500 feet is more dangerous for women if there is a tendency to hemorrhage. The author thinks that if the diagnosis is made early, and the patient sent here, eighty per cent will recover. If there are large cavities in one lung patient should submit to the Murphy operation first. Cobb prefers Arizona, New Mexico and Western Texas to other parts of this region, and speaks specially of Las Vegas Hot Springs, New Mexico. He has appended a directory of the principal towns and their advantages.

The Importance of Prolonged Rest in Bed after Acute Cardiac Inflammation in Children.—Holt (*Archives of Pediatrics*, December, 1899) gives three reasons why cardiac inflammations are likely to be serious in childhood: (1) The frequency with which both the endo- and pericardium are involved; (2) the great tendency to acute dilatation; (3) the liability of these attacks to be complicated with pneumonia. The cardiac muscle in young children is very susceptible to dilatation in acute inflammations, especially if complicated with pericarditis. This condition of the heart walls should be treated by absolute rest, not only through the attack, but for two or three months after. The author gives the history of two cases to illustrate the good effects of this treatment.

CASE I.—Male, three and one-half years old. Family history rheumatic. Taken on March 9, 1897, with an attack of acute rheumatism, on

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the fifth day of which a systolic murmur was heard at the apex of the heart. During the early part of the second week the symptoms subsided, except the murmur, which became more pronounced. On the thirteenth day the temperature rose, and acute pericarditis followed by pneumonia of left lung, developed two days later. Patient was much prostrated. Pulse 140, weak and irregular; there was a double murmur at the apex, increasing dilatation was evident. The patient improved gradually, but on April 5th another attack of pneumonia came on. Oxygen was given constantly, and strychnine and digitalis pushed as far as possible. He rallied gradually, the dilatation steadily increasing. At the end of the fifth week the apex impulse was three-fourths inch to the left and below the nipple; double murmur at apex, impulse heaving; pulse usually regular. The patient was given digitalis and strychnine and kept flat on his back until the first part of July and for three months after this retained this position most of the time. Two years after the acute attack the boy was in good health, the apex beat one-half inch within the murmuring line and in the fifth space; impulse normal and murmur faint. There was no return of the rheumatic symptoms.

CASE II.—Female, aged 8, having strong rheumatic family history. Following exposure a temperature of 103.6° was developed. Respiration difficult, 50; pulse 136 and weak. Over the left chest was an area of dullness, over the upper portion of which was a loud pericardial friction sound; double murmur was heard at the apex; systolic murmur at the angle of the left scapula. Diagnosis mitral valvulitis and pericarditis with effusion. Salicylate of soda, digitalis and morphia were given, and patient improved. Shortly after this the patient sustained two successive attacks of pneumonia, at the end of which the apex beat was an inch to the left and one and one-fourth inches below the nipple. Fever remained high and irregular, but was reduced with quinine. Treatment was on the same plan as the previous case; rest in bed for two months, and a careful and gradual increase of exercise after that time. Twenty-one months after the acute attack patient had entirely recovered, having had no rheumatism or cardiac symptoms. Apex beat in the mammary line and one-half inch below the nipple; murmur very faint; pulse full, strong and regular. General health excellent and development in every way satisfactory. In order to better show the superiority of the rest treatment the author reports a case of endocarditis complicating pneumonia, in which the conditions for recovery were much more favorable, but owing to the neglect of enforcing rest, the patient succumbed seven months after the mitral attack from progressive cardiac failure.

Report of a Case of Alcoholic Multiple Neuritis, with Autopsy.—Larkin and Jelliffe (*Med. Rec.*, Vol. 56, No. 2) report this case on account of its simple uncomplicated nature, the pathological picture thus showing the effects only of the acute alcoholic poisoning. The patient, Mrs. C. S., aged thirty-five, was admitted to St. Francis Hospital, May 13, 1898, with paralysis and excruciating pains in arms and legs, slight catarrhal jaundice

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and gastric disturbance following a prolonged spree. The trouble began about April 2 with a feeling of "pins and needles" in the extremities, increasing to pain, which grew rapidly worse. On admission patient had spasmodic twitching of leg muscles and intense pain in back, arms and legs with some œdema. Physical examination showed a systolic murmur of moderate intensity, which was transmitted under the left axilla. Lungs normal; liver extended three finger breadths below ribs on right side; spleen slightly enlarged; abdomen normal. Urine specific gravity 1018, acid, small amount of albumen, few red and white blood corpuscles; involuntary evacuation of bladder and rectum. Legs were drawn up and pain increased on pressure over nerve trunks. There was double drop-foot and drop wrist; skin and tendon reflexes of arms and legs lost. Muscles of forearm atrophied. Analgesia to needle pricks and faradic current existed. May 27, pulse was rapid and small, temperature 103°; patient slightly delirious, which changed on the 29th to a stuperous condition, in which she died on the 31st. The autopsy showed a general jaundice; œdema and congestion of posterior portion of lungs. Mitral valves were thickened along the free edge. Liver congested and in a condition of mild cirrhosis; spleen and kidneys congested. Microscopical examination showed an increase of connective tissue and congestion of blood vessels in liver and kidneys. In the examination of the nervous system particular attention was given to the ganglionic cells. In the whole length of the spinal cord marked ganglionic degeneration was found involving all but few of the cells in the anterior and posterior horns, the columns of Clarke and the nucleus of Stilling. Nearly every grade of chromatolysis occurred, the central form predominating. In the dorsal and lumbar regions this had advanced to a complete loss of stainable substance, and in many cases to complete cell destruction. Eccentricity of the nucleus was a prominent feature. The left side of the cord was most involved, there being here a great decrease in the number of cells and much advanced chromatolysis in the remaining. At most of the levels the nucleus was involved, and in some cases the nucleolus fragmented. Sections of the brain showed a general degeneration of the cells throughout the cortex. This was most marked in the motor area, where ganglionic cells were bleached, the stichochrome structure being either absent or altered; nucleus irregular in posterior, and in a few cells advanced grades of chromatolysis was found. The blood vessels were not markedly altered. In the cerebellum there was marked peripheral chromatolysis of the cells of Purjinké. Nucleoli were irregular, but nucleus not usually eccentric; vessels normal. The authors then review a series of reports of cases, from which they conclude that to what extent these lesions are due to the action of an alcoholic poison on the molecular structure of the cell, or to the degeneration of the peripheral extensions of the sensory and motor neurons cannot be determined, but that the perpheral degeneration is probably the more important. They accept the hypothesis of Van Gehuchten to account for the degeneration of the columns of Clarke, which is that the cells in a nervous chain exert a trophic function, the one over the other, and that a degeneration of one is followed by a degeneration of the other.

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Society Proceedings.

BRAINARD DISTRICT MEDICAL SOCIETY.

Society convened 10 A. M. in the council room of the City Hall, Lincoln, Ill. In the absence of the President and Vice-President, Dr. Hurst was chosen President *pro tem*. Drs. Hill and Cargill were appointed to fill vacancies on Board of Censors.

By consent the Secretary deferred roll call till the afternoon session. Minutes of July meeting were read and approved.

The applications for membership of Drs. Maskel Lee, of Atlantic, and J. T. Woodward, of Lincoln, were received during the session, and after a favorable report from the Censors, the gentlemen were unanimously elected to membership in the Society.

DR. BLACK, for the Committee on Microscopy, presented a resume of the debt of modern medicine to the original investigator, and especially to the microscopist. Wm. Harvey's discovery of the circulation of blood and lymph; Duverney's as to the growth of bone; Malpighi's, which were distinctly the result of microscopic research, and Hook's investigations were the great acquirements of the seventeenth century. In the eighteenth century Haller, of Berne, a most versatile thinker and student, and a most original and independent experimenter, revived the study of minute anatomy and experimental physiology. Jenner's work also made this century memorable. In the century just closing the microscope has been closely connected with every great advance in medicine. Dupuytron, Von Rokitansky, Von Hebra, Virchow, Pasteur, Koch, Billroth, have all been great students of the minute processes of the human body. Almost every prominent man of the present day is glad to acknowledge his debt to the microscope and to the experimenter. It is unfortunate, to say the least, that there exists in the profession today a tendency to belittle those who are giving their time and strength to this class of work; to speak of them as "mere experimenters," and to discredit their efforts for the advancement of the science of medicine. On the contrary, every practitioner should hold such men in honor, be ready to give them a candid hearing to their announcements of results, and where these cannot be accepted at once in full, at least give them credit for honest and praiseworthy work. If possible, too, every one should give his patients the advantage of careful microscopic work in the study of cases. The work of the Johns Hopkins investigators is especially credible, and should be encouraged by subscription to their publication.

DR. BLACK then presented a report on a "Case of Necrosis of the Tibia." Boy, 2 years of age, was attacked with disease near the the knee-joint which was diagnosticated as rheumatism. When seen by Dr. Black after some time, there were four or five small openings discharging pus, along the tibia. Incisions, practically continuous, were made uniting these openings, and bone was chiseled away so as to allow the removal of all soft material within the bone. No firm bone was removed, except to make these openings. It seems better to relieve in this way and allow nature to form the involucrum, removing sequestra later, if necessary. The limb was extremely flexed, and it seemed doubtful whether the knee would ever be useful. All the remaining bone gradually softened and came away, till

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the boy has an entirely new tibia. This accomplished, the boy was put through a careful course of work in the gymnasium, and massage was thoroughly used. After two months there was perfect restoration of function.

This case illustrates what may be accomplished in cases of necrosis in accessible regions. The early diagnosis would enable most cases to be arrested before the disease has advanced, as in this case. It is particularly apt to be mistaken for rheumatism.

DISCUSSION.

DR. BROWN, of Lincoln.—This subject demands study from both physician and surgeon. Rheumatism is a too frequent diagnosis. Osteo-myelitis is not always easy to diagnosticate at its beginning. In the case of a girl, aged 9, rheumatism of the right knee was the first diagnosis. Suppuration eventually appeared. Incision and drainage did not produce satisfactory results, and she was brought to Dr. Brown. Infiltration was marked all about the extremity of the tibia. An anesthetic was given and a free incision made. No line of separation between dead and healthy bone was discoverable. Free drainage was given, and it was left to form a sequestrum. The process is slow and the waiting is annoying, but it is better than chiseling away the tibia. It is impossible to tell how much of the bone will die. The general condition should be kept as good as possible No febrile symptoms are liable to bother after free drainage is given. This case was probably traumatic in origin. It is a question how much a blow may have to do with these cases. Two years before a sister of this child had tubercular empyema, and it is possible that this may be of similar origin. It is especially necessary to establish free drainage as soon as possible after the onset of the disease. Cod liver oil is also of advantage. In acute cases it may be best to trephine the bone and secure early drainage of the medullary canal.

DR. MASKEL LEE, of Atlanta.— In country towns without hospital facilities, and with the prejudices of the people to meet, we have different conditions to confront in these cases. In a case of tubercular origin where there was complete loss of the tibia, free drainage for a year resulted in a complete recovery.

DR. S. T. HURST, of Greenview.—The periosteum is often the seat of the trouble, and if treated before necrosis has occurred it may often be prevented. Rheumatic periostitis may go on to suppuration and necrosis. In an observed case a septic vaccination lead to periostitis of the coccyx, small finger, thumb and humerus, all of which exfoliated. Dr. Brown's commendation of cod liver oil in these cases is excellent. Many of them are syphilitic in origin. In a child so diseased any slight traumatism may cause these bone diseases. Bichloride of mercury, gr. $\frac{1}{100}$, is a valuable remedy even if no specific trouble is suspected.

DR. NORBURY, of Jacksonville, remarked that periostitis is one of the sequelæ of typhoid fever. It is rare, and the literature is not extensive. Keene's recent book is the best on the subject.

DR. BLACK, in closing, said: It is true that the great difficulty and the most important thing in these cases is a correct and early diagnosis. Upon this depends the treatment, which is not extremely difficult when such a diagnosis is made.

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DR. FRANC P. NORBURY'S paper, "Cases Illustrating Types of Cerebral Hemorrhage, was read. (See FORTNIGHTLY of November 15, 1899.) It was discussed by Dr. Black and by Dr. Kreider, of Springfield.

DR. CARGILL, of Mason City, presented a clinical case showing unusual features of mastoid disease. It was the case presented at Havana last April. There is extensive inflammation of the cellular tissue of the neck. Enlargement of the glands has never been a marked feature of the case, though there is some enlargement of a few of the cervical glands.

DR. BLACK said that when he operated, removing the diseased part of the mastoid first affected, he supposed this would put a stop to the trouble. The man's general condition has been better, but the infection has spread to new areas, producing an exudate which has separated the muscles of the neck and separated the muscles from the periosteum. There is a sub acute periostitis running around the base of the skull. There may be another focus of necrosis. There is a permeable canal from one mastoid to the other. The disease is unaffected by iodides and mercurials. No bacteriological study has yet been made.

DR. BROWN said the case is one of unusual infection causing a subacute inflammation. There is probably necrosis somewhere, enough to keep the tissues infiltrated. It needs investigation with little interference, until the foci are located. These will probably be found in the mastoid cells.

DR. KREIDER.—Such a case has not be pursued to an ultimate conclusion until a bacteriological investigation has been made and the blood studied. The infection may have originated in the tonsil. If it is tuberculous creosote should be used, 40 drops three times a day would be a good amount. It may be advantageously given in panopeptone, well diluted, and given to the limit of tolerance.

DR. LOWIE thought large doses of creosote would be of value in the case. Had himself taken as high as thirty drops three times a day of pure beechwood creosote well diluted in wine.

DR. G. N. KREIDER, of Springfield, discussed stone in the urinary bladder and pelvis of the kidney, giving a highly interesting demonstration of the character of the stones and of the diagnosis. The importance and methods of urinary analysis in the diagnosis were shown. The four varieties of vesical calculi are (1) uric acid or uric acid salts, (2) phosphates and carbonates, (3) calcium oxalate, (4) cystine and xanthine. Illustrative cases and specimens were given. Cases of renal calculi were also reported.

DISCUSSION.

DR. BLACK spoke of the methods of operation for relief of these cases.

DR. BROWN said that the character of the drinking water used has much to do with the stone formation.

DR. LOWRIE.—Calculi are more often developed in a limestone region. Cases were mentioned showing this influence.

DR. WOODWARD also regarded this as an important factor here.

DR. NORBURY discussed the differential diagnosis of renal calculi.

DR. HURST spoke of the genesis of stone, believing that a non-specific catarrhal condition of the kidney or bladder, as the case might be, is an important factor.

On motion, Society adjourned. K. MILLER, M. D., Secretary.

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PRACTICAL THERAPEUTICS.

A New Anesthetic from which excellent results have been obtained, was described in a recent issue of the Journal of the American Medical Association. It consists of a chemical compound of chloroform, acetone, and caustic potash, and is known as chloretone. Those who have experimented with it show that it does not weaken the heart, as the coal-tar products are suspected of doing, while on the other hand it exercises no disturbing influence on the digestive organs, which makes it preferable to opium derivatives.

A Century of Progress in Surgery.—The Norwich Pharmacal Company has lately issued a book under the above title, which is full of valuable information, the subject-matter is in the main a reproduction of clinical reports, from authors of the highest repute, which have appeared in various of the medical journals of the country. The use of ointments, and especially of unguentine in surgery is very clearly demonstrated. The topics are arranged alphabetically and are made, by the use of display type, ready for quick reference; the illustrations are excellent, and add much to the worth of the book. The Norwich Pharmacal Company will send a copy of the book to those of our readers who make application, mentioning the FORTNIGHTLY.

Coca and Its Therapeutic Application (Mariani).—A third edition of this little book is sure to be appreciated by the profession. Coca has become so essentially a part of our every-day therapy and so much that is ostensibly coca, but in reality innocent of the presence of real coca is urged on the man of medicine that it is quite necessary to be informed as to the nature and characteristics of the real thing; that is the mission of this book. No one is better fitted to speak as an authority on the subject than is Mariani, his work has made coca its place as a therapeutic agent, and no higher recommendation can be given the book than the information that it comes from his pen. It will be sent to physicians who make their desire known to Messrs. Mariani & Co., New York.

The Antikamnia Calendar for 1900.—The profession of the English speaking world has during the last two years been favored with a most unique and attractive calendar, which has been issued by the Antikamnia Chemical Company; the Crusius skeleton sketches have excited admiration wherever they have been seen, and their use by the Antikamnia Co. has introduced them to many who might never else have had the opportunity of seeing them. The death of that gifted artist-physician was most sincerely regretted by the profession for the many reasons which are always felt when an able co-worker is called to his reward, but there was an additional sorrow in the loss of an artist, whose place no one can fill. It is indeed a satisfaction to find that there are still some of his inimitable sketches which have not, up to the present time, been published, Some of these have been utilized by the Antikamnia Co. in their calendar for 1900; it is a certainty that all who have seen the previous issues, or who are familiar with Crusius work, which has appeared elsewhere, will most gladly welcome this calendar. The plan of issue has been arranged on the same generous basis that has been followed in previous years, so it is safe to say each and all of our readers will receive and enjoy a copy.

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Mr. L. M., aged 49, had chronic rheumatism of the hip and the symptoms of uric acid were also present, and the man plainly showed that he was a high liver. On Allouez, taken in the manner already described, he made a speedy recovery, using the water only six weeks.

I could give other cases, but these will, I think, suffice to show my treatment.—Robert C. Kenner, M. D., Louisville, Ky.

Flavell's Elastic Truss is eminently scientific in every detail of its construction. It merits the favor and recognition of the Medical Profession. In order to cure Hernia, a truss must be worn at all times, and the Elastic Truss manufactured by Flavell can be worn day and night with absolute comfort. It is simplest, the most durable and effective.

PHYSICIANS' PARTY FOR PARIS.—Preparations are in progress for the organization of a select party of physicians and their families for a trip to the Paris Exposition and the International Medical Congress, which is to be held in Paris next summer. On account of the heavy travel across the Atlantic, and the consequent difficulty of securing proper and adequate accommodations in Paris, this party is being organized with a view to making reservations in advance and thus provide for the comfort and pleasure of all who join the club. The arrangements are in the hands of Dr. J. W. Cokenower of Iowa, Dr. J. W. Pettit of Illinois and Chas. Wood Fassett of Missouri, who will accompany the club from their respective states. Already nearly 200 have registered, thus assuring the success of the expedition, and sufficient to justify them in chartering two elegant steamships, the "City of Rome" and the "Nebraska," both sailing on June 30. A very low club rate will be obtained by all those who register early, and all expenses guaranteed, thus affording protection against extortionate charges so prevalent in foreign countries. Since chartering these boats, the ocean rates have advanced, and will go higher after March 1st, so that those who do not register at once cannot depend upon obtaining the rates prevailing at the present time. This party will be under the guidance of one of the most experienced tourist guides in the country, who will attend to all details, baggage, transportation, etc. Side trips will be made to Italy, Ireland, Holland and Ober-Ammergau, where the "Passion Play" will be produced during June, July and August.

Delegations are being made up from the various state medical societies, and arrangements will be perfected early in the new year for a central meeting-place, from which to start on the journey. Full information and itineraries may be obtained of either of the undersigned.

J. W. COKENOWER, Des Moines, Iowa.
J. W. PETTIT, Ottawa, Illinois.
CHAS. WOOD FASSETT, St. Joseph, Mo.

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The Medical Fortnightly.

Issued Tenth and Twenty-fifth of Every Month by the Fortnightly Press Co.

UNDER THE EDITORIAL DIRECTION OF

FRANK PARSONS NORBURY, M. D. AND THOS. A. HOPKINS, M. D.

Secretary: CHARLES WOOD FASSETT.

A COSMOPOLITAN BIWEEKLY FOR THE GENERAL PRACTITIONER

Editorial Offices in St. Louis, Chicago, Cincinnati, Jacksonville, St. Joseph, Kansas City, and Pueblo, where specimen copies may be obtained and subscriptions will be taken.

Address all business communications to the Fortnightly Press Company.

Address all contributions and books for review to the Editors, Century Building, Saint Louis.

Volume XVII **FEBRUARY TENTH** **Number 3**

Editorial Department.

Medical Culture.

THE medical profession ranks as one of the three great learned professions. From the time of the foundation of medicine physicians have always held a prominent position among the cultured of society. This position they have justly earned; they are worthy recipients of all such honors. In America the physician occupies a more exalted, truly great and more appreciated position among cultured people than in some of the countries of Europe. Here a man is taken for what he is worth; and if he possesses intellectual attributes sufficient to class him among the cultured, he will most assuredly receive deserving recognition. The natural student is measured by his intellectual worth.

It is a glorious honor to be ranked among the cultured in medicine. A physician may in these day of great possibilities, by skillful maneuvering, win position and wealth, but he can never win the coveted honors of medical culture, except by the same old route, of intellectual attainments. A true physician is not measured by the dollar sign, but by that priceless possession, medical culture. Medical culture "is the marriage of thought with nature." Not a limitation of medical thought to one branch of medical science and the study of nature in this contracted field of observation, but that liberal study and observation of the whole broad field of medical vision, from which eventuates the cultured medical man. Emerson tells us that God offers to every mind its choice between truth and repose. Take which you please—you can never have both. In medicine, the physician in whom the love of repose predominates, will never advance much beyond the teachings he received at medical college, he accepts the first medical thought given him by his teachers as final; he shuts the door to progress in medical culture as soon as he gets his diploma, and goes out into practice, gets money perhaps, or position, but he is aloof from culture; he is not a student, his journals, if he takes any, are to be found on his desk unopened; his medical library consists of the few text-books he is compelled to buy when a student, and here, in blissful repose, he settles down to a life of routine.

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Where are these men to be found? In almost every community, but especially in our great cities, where location is more favorable for the man to get into the drift and float along under the shadow of medical culture, from which he draws the false conclusion, that he is a part of the great progressive army of cultured medical men. A great city is not the seat of general culture, although it must, and always will be, the seat of high medical culture, because of the advantages for medical progress therein to be found. But on the other hand, the most sublime specimens of repose in medical intellectuality are within the same confines.

It remains for the medical man in the smaller cities, where true American life prevails, to attain the highest grade of true culture. Here entire self-reliance imparts a mental stability, which rounds out the intellectual integrity necessary for a man to rank among the cultured. Our great cities are the seats of industry, and of commerce, but they never can or will be the seats of culture. By culture is meant the highest attainments in intellectual life which give to man that sovereignty of mind, wherein all wisdom and all good abide. The physician in the large city is isolated from the cultured class, he has less in common with them, more than in the smaller cities.

It is true elite society attains its most perfect evolution where wealth abides, but the most cultivated social coterie is in the smaller cities, and especially the "college towns." One of the most widely travelled and best known women of the French Republic, Madam Blanc, after a year's tour of the United States, during which time she visited all of the great cities, and came in contact with the best people of these cities, said upon her return to France, that the city showing the greatest culture anywhere in America, was Galesburg, Ill., a city of about 15,000 inhabitants—"a college town."

When you find such an atmosphere of culture, you will always find the medical man is a part of it. Such a community invites medical culture, and say what you will, there is more of it in proportion to the number of the inhabitants in such a community than you will find in any large city. The medical man in such a community must be a cultured man to hold his own with his neighbors, his friends and his patrons. But aside from this natural demand is the satisfaction of living in such an atmosphere, of being a part of it, it makes the scholar, it makes the physician, and gives dignity and honor to true medical culture. F. P. N.

YOUNG men before entering one of the principal medical schools of this country are examined as to their general knowledge. One of the questions given to the candidates for one of these schools last year was: "What are the names of the books of the Bible?" Of one hundred and twenty answers, only five were correct. Among the names of books given were: "Philistines," "Marcus Aurelius" and "Epistle to the Filipinos." —February *Ladies' Home Journal.*

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The Peculiar Christian Scientists.

IN THAT sprightly, queer little "periodical of protest," called *The Philistine*, there appears this month a pitiable, illogical little reply to Mark Twain's recent *Cosmopolitan* article on the "Christian Science Fad and Delusion." Either the reasoning faculties of *Philistine* have become badly twisted, or else he is not sincere in what he says. He seems to lean to christian science. In the broad humor of Mark Twain there is clearly more sound sense than in the protesting seriousness of the whole of *Philistine's* article. Unlike Mark Twain, *Philistine* is full of mean sarcasm, vindictiveness and scarcely-concealed anger. *Philistine* says, "It is a well-known fact among all intelligent people, that christian scientists especially taboo eye glasses of every sort and kind." Clearly *Philistine* knows less about christian scientists than does Mark Twain, whom he impertinently declares has never "associated with" or known them. The writer will be glad to introduce *Philistine* at any time to some of his friends, christian scientists, who wear glasses.

Philistine says he has seen people grievously ill "who were claimed back into health and usefulness when they renounced all material medicine and gave themselves into the hands of christian science." Very probably! There is a large class of people, well known to physicians, who swallow a lot of needless medicine, when there is nothing the matter with them. Medicine taking, like christian science, may become a fad with some irrational neurotics and ignorant hysterics. But *Philistine* intends to convey the idea that these people were diseased physically, and by christian science have been made whole again physically. At once we assert, that neither *Philistine* himself, nor even the quondam patient is competent to decide such a question. *Apparent cures are not real cures*, any more than relief from pain by a hypodermic injection of morphine is a cure. Only one who knows the nature of the disease, the means employed to modify it, and the nature of that modification, is at all competent to decide whether the patient has been cured or not. *Philistine*, and christian scientists generally, are presumptuous and egotistical in asserting facts about which they know absolutely nothing, not even the slightest elements.

Philistine grieves that Mark Twain does not appreciate more the lofty moral and religious teaching of Mrs. Eddy and her cult, and in consequence he devotes nearly all he has to say to a commendation of christian science as a religion. There *Philistine*, like all christian scientists, reveals the wabbling condition of his reasoning faculties. The dispute is not with christian science as a religion, or a system of morals, or a simple belief; the dispute with it is solely on the ground of its capability to handle physical changes, known as organic disease, in our physical bodies. An easy way to dodge and escape this hard thrust is of course to deny the physical body, and that is the cowardly way that christian science escapes. All discussion, of course, ceases the moment one or the other side denies the reality of its opponent. That is magnificent strategy, but it is not fair, honest, logical, reasonable, scientific or christian. Science loves to discuss and compare, and Christ hesitated not to reason together with his opponents.

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Philistine caps the climax in his queer, hysterical little protest when he naively asks us to "imagine what the reputation of Jesus would have been had he lived to be eighty, and been pensioned by the estate of Joseph of Arimathea, and then finally died in a home for superannuated ministers?" In the name of the Divine Savior, could blasphemy go farther! The Christ, the Son of God, whom the christian scientists so devoutly believe in, falling into "babbling senility," as *Philistine* clearly intimates Mrs. Eddy is falling into! He says Mrs. Eddy will now be written down in history as a "quasi fakir, and Olio will bracket her with Ann Lee, Francis Schlatter and John Smith of Nauvoo." "Already," he says, "she has lived too long." Perhaps he is right about Mrs. Eddy, but to think it possible that the divine, loving Savior of mankind could ever live too long! Clearly *Philistine* is one of those who would have cried out, "crucify him, crucify him, both for his own and christianity's sake. He may live too long, and become a burden to his friends and a charge upon the charitable." And that said of Christ! Well may christian science pray to be delivered from the hands of its friends, and well does it begin to appear that it is even *less* christian than it is scientific.

L. H. M.

Home Treatment of Consumption in This Climate.

ALL treatment is based on diagnosis. It is, therefore, of the first importance that we recognize consumption before we can hope to effectively direct treatment. The advantages of an early diagnosis of consumption are obvious. And when we consider that tuberculosis, in its varied forms, is the one disease universally distributed among civilized races; the one disease which directly or indirectly affects civilized man beyond our comprehension, it is imperative that we do all in our power to make an early diagnosis, that thus being forewarned we may become armed to meet its invasion. Tuberculosis may go unrecognized. The beginnings of the disease not infrequently run the whole gamut of disease before the correct diagnosis is made. This should not be, for while we are all liable to err, yet if we practice eternal vigilance in our observations of a case, we should, with the aid of the newer methods of diagnosis arrive at an early decision.

To begin, we must go to the first principles, and learn that a patient cannot be afflicted with tuberculosis in any form without first being infected with the bacillus tuberculosis. We all have opportunities enough to become infected, but thank fortune, our tissues present resistance sufficient under normal conditions to prevent the harboring of the parasite. The soil not being suitable the seed does not grow. But let a lessened resistance occur, as for instance, following or accompanying an attack of la grippe, typhoid fever, or other debilitating conditions, and the soil is then cultivated and ready for the seed. Then infection may occur. We must, therefore, in considering diagnosis, consider, first, etiological conditions—diathesis, while we know that comparatively few cases are inherited, yet we know, truly, that a predisposition runs in families, on account of the feeble resistance offered to the invasion of the tubercle bacillus. Next consider that

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every case of a chronic nature, obscure in origin, should be put under suspicion as being tuberculosis.

Enlarged glands, pathological conditions of the lymphoid tissues of the throat, the bronchial glands, also the pleural membrane and the peritoneum should be watched carefully. All digestive disorders should be observed, for many cases of dyspepsia are tubercular cases first shown in this manner. Again, many cases of nervous dyspepsia, and diagnosed neurasthenia, are cases of tuberculosis. The temperature should be observed, especially in cases where we have accelerated pulse, a history of an old pleurisy and a mild bronchial catarrh. A pulmonary hemorrhage ushered in without warning or previous intimation is usually tubercular, and should be so regarded.

To clinch the diagnosis, however, in all cases, we need the confirming knowledge of the presence of tubercle bacilli. When found in serum, blood, pus, or the secretion from any gland or mucous membrane, then we are certain of our diagnosis. Again, the positive diagnosis by the use of tuberculin is invaluable in obscure cases. I say positive, because in nine cases out of ten the reaction indicates the presence of tuberculosis. Tuberculin is an invaluable agent in diagnosis, for, as Whittaker well says, "it enables us to distinguish the disease at the start, before the development of sepsis and other complications which go to make up the composite picture we call phthisis." The test is of especial value just at the time when it is most needed; that is, when we can hope to direct treatment with a view of being able to overcome the disease. We all remember the able work done by the State Veterinarians of Illinois, and the tests made among the herds of the State institutions, with a view of eradicating tuberculosis. The results justified the expense, and encourage us to use this agent in diagnosis in cases occurring in our practice.

Now, granting the diagnosis has been made, in incipient cases, what is to be the treatment, when it is impossible for the patient to take advantage of a more suitable climate? Unquestionably, the treatment of tuberculosis is one of nutrition, we must nourish the patient, and to this end his hygienic surroundings must be arranged for this. He must go into training and improve his resistance, build up his body, and prepare to fight a good fight.

Osler, in a paper before the Medical and Chirurgical Faculty of Maryland (*Maryland Med. Jour.*) said in speaking of Home Treatment of Consumption, "Of the measures by which the general nutrition of the body may be encouraged and improved, the first and most important is fresh air." He insists upon fresh air, and gives the following directions to his patients, to insure that they get it: "Take the almanac and count the hours of sunshine. In winter cut off two hours in the morning and an hour in the evening, and for the rest of the day the patient is to be out of doors. If there is no possible arrangement for life out of doors, the patient is to be in a room with southern exposure with the windows wide open. The bed is to be moved into the sunshine. If there is a balcony or a veranda with a good outlook towards the south, it should be arranged for the patient; if not, a sheltered protection can be put up in the yard at a very moderate cost, on a well padded lounge, covered with a couple of thick blankets, well wrapped up, the patient sits or reclines all day, coming in only to attend to

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the want of nature. Only on blustering, stormy or very rainy days is the patient to remain in the house. No degree of cold is a contraindication. This continuous open air life, at rest, is the most powerful influence we have against the fever of tuberculosis. It may take a month; it may take two or three months before the temperature reaches normal, but it has been one of the many valuable lessons we have learned from Tradeau, that in the fever of consumption the patient should not only be out of doors, but at rest, taking no exercise. The bedroom should be ventilated, and the patient gradually accustomed to sleep with the window open."

Knopf in his recent valuable book, "Prophylaxis and Treatment of Pulmonary Tuberculosis," enlarges upon this advice, and conclusively shows the value of open air treatment, as pursued in sanataria especially designed for such cases.

In addition to open air, we must insist upon good food, which is Osler's second measure of importance. Over-feeding is the rule, but methods vary with the patient, likewise the food. Ely, of Rochester, and also Osler, commend eggs as a suitable diet. Ely uses raw eggs, and prescribes them by the dozen. Osler begins with one raw egg, three times a day, increasing gradually until as many as two dozen a day have been prescribed. They are broken into an egg-cup, sprinkled with salt and pepper, and swallowed without breaking the yolk. I like the malt foods with cod liver oil, hypophosphites and creosote. I have used maltine with creosote lately with success, giving it with increasing doses, until large doses are taken, every four hours. I frequently employ the liquid peptonoids (Arlington Chemical Co.) as a vehicle for creosote, and recently in the case of a child a year old—a victim of broncho-pneumonia form of tuberculosis, I gave as much as fifteen drops of beechwood creosote in the peptonoids every four hours, and it was retained nicely. I believe in using creosote in full doses I use butter, cream and cocoa-butter locally to give additional fat. To control the cough I have lately prescribed heroin with success, but we must be careful in its use for it is deceptive. F. P. N.

Change of Dates of Issue.

AT A recent meeting of the Fortnightly Press Company, it was unanimously voted to change the dates of publication of this magazine from the 1st and 15th to the 10th and 25th of each month. We believe the best interests of both editor and reader will be subserved by this change; the subscriber receives his journal at a time when his mind is not preoccupied with his "accounts," and he has more leisure to devote to the study of current literature; the editors, for the same or similar reasons, hope to show improvement in the products of their pens. Subscribers not receiving their magazines promptly on dates mentioned, will confer a favor on us by reporting omissions or delays to this office.

THE DECATUR (ILL.) MEDICAL SOCIETY is one of the flourishing active Societies of the State. It has recently been re-organized and has set a pace which will make it a useful organization in its locality, at the last meeting, January 25th, in Decatur, diphtheria was the subject for discussion, and our next number will contain a synopsis of the proceedings.

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The Reviewer's Table.

Books, Reprints, and Instruments for this department, should be sent to the Editors, St. Louis

PROGRESSIVE MEDICINE: A QUARTERLY DIGEST OF ADVANCES, DISCOVERIES AND IMPROVEMENTS IN THE MEDICAL AND SURGICAL SCIENCES. Edited by HOBART A. HARE, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, etc. Vol. IV. December, 1899.

THE present volume includes the following articles: "Diseases of the Digestive Tract and Allied Organs, the Liver, Pancreas and Peritoneum," by Charles G. Stockton, M. D.; "Cenito-Urinary Diseases in the Male, and Syphilis," by William T. Belfield, M. D.; "Fractures, Dislocations, Surgery of the Extremities, and Orthopedics," by Joseph C. Bloodgood, M. D.; "Diseases of the Kidneys," by John Rose Bradford, M.D., F.R.C.P.; "Physiology," by Albert P. Brubaker, M.D.; "Anatomy," by Frederic H. Gerrish, M.D.; "Hygiene," by Henry B. Baker, M. D.; "Practical Therapeutic Referendum," by E. Q. Thornton, M.D. This volume completes the year, and establishes the quarterly as the most reliable digest of practical medicinè and surgery yet published. Each article is a resume of the essentials of progress pertaining to these specialties presented in the form of a commentary in which what is good and reliable is picked out and commented upon. We value this periodical highly, and recommend it to physicians as one of their necessary working tools and guides. F. P. N.

AMONG THE MAGAZINES.

THE topics editorially treated in the *American Monhtly Review of Reviews* for February are the Nicaragua Canal proposition now before Congress, the Canadian and Erie Canal projects, underground transit in New York and elsewhere, the currency and business situation, the Treasury and the banks, the popular election of Senators, Mr. Beveridge's speech in the Senate on the Phillippine question, our tariff policy in Puerto Rico and Cuba, the meaning of "neutrality" in the Boer war, and the strength and weakness of the Boer position.

There is nothing harder for a young mother than to find herself suddenly so placed that she is unable to come and go freely, as was her wont in the early married days before the baby came, while the father comes and goes as ever and is not tied down at all. The father must be very patient and sympathetic while the mother adjusts herself to this new life of hers, as a sweet woman soon will learn to do, for if he is thoughtless here he is planting seeds of failure which will grow to gigantic proportions. He must keep in touch with the mother in these days, that they may walk together later, and all through even to the end.—February *Ladies' Home Journal.*

THE FEBRUARY CENTURY.—The last of the "body" articles in the February *Century* is the one that will doubtless attract the most attention. This is the first instalment of hitherto unpublished extracts from the private diary of Dr. B. E. O'Meara, Napoleon Bonaparte's physician at St. Helena.

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The original manuscript of this journal, in eighteen little volumes, has come into the possession of The Century Co., and is found to afford a surprisingly amount of new material in the way of conversations with the exiled Emperor. These "Talks with Napoleon" will form an important feature of *The Century* during the year 1900. The editor has evidently had in mind the multitude of visitors to the French Exposition in organizing the series on "Paris today," by Richard Whiteing, author of "No. 5 John Street" and "The Island." The first of these papers, "Paris Revisited," appears in this number. Mr. Whiteing, who knows his Paris as few Englishmen know it, takes a bird's-eye view of the city from the Eiffel Tower; but his comments and criticisms on the people and their governmental machine are at least as piquant as his descriptive passages. The French illustrator Castaigne provides a running pictorial comment on the text.

THE FEBRUARY ST. NICHOLAS.—An older "institution" than *St. Nicholas* itself is pictured in the frontispiece of the February number of the only American magazine for young folks—to wit, the Sphinx; and picturesque facts about that prehistoric Egyptian creature—facts with which all children should be, but all are not, familiar—are set forth by Emma J. Arnold, with illustrations by Harry Fenn and Malcolm Fraser. The "Unsuccessful Colony" to which Elbridge S. Brooks introduces his little group of historical travellers was New Albion, sometimes called Plowden's Patent, in honor of Sir Edmund Plowden, to whom Charles I. made a large grant which the patentee was never able to turn to account—a grant that included a considerable part of the Middle Atlantic States. The Chinese as fliers of pigeons and kites make their appearance in Alfred D. Sheffield's "Pigeons of Peking;" and a flying trip beneath the headlight of an express train engine on a Louisiana railway on a hot midsummer night is described with realistic touches by Albert Bigelow Paine. In "A Favorite Birth Year," Joseph B. Gilder calls attention to the fact that Lincoln, Gladstone, Tennyson, Poe, Dr. Holmes, Darwin, Mendelssohn, Chopin, and other famous men were all born in 1809, and three of them in the same month (February).

SCRIBNER'S MAGAZINE FOR FEBRUARY has for its frontispiece a portrait of Donald G. Mitchell, recently drawn from life by A. I. Keller. This is printed in tints, and is a striking likeness of the venerable author of "Reveries of a Bachelor." It is accompanied with an article on "The Master of Edgewood," by Arthur Reed Kimball, who writes on that gracious and personal side of Mr. Mitchell's long literary career which is associated with his farm and his friends. "The Opening Period of the Boer War" is brilliantly described by H. J. Whigham (who made his reputation as a correspondent in the Spanish War). He is accompanying the Modder River column, and describes the movement of troops from Cape Town to the front. His own photographs give a realistic picture of the actual conditions encountered by the troops. Future articles will follow this exciting campaign. Major I. Bently Mott, late adjutant-general of the department of Havana, describes "The Social Life of Havana." He corrects many false impressions in regard to what society is in that capital. The gaiety, dignity, and refinement of what is best in Havana social life are graphically pictured—the dances, the music, the beauty of Cuban women.

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Original Department.

PAPERS for the Original department should be in hand one month in advance, and contributed to THE MEDICAL FORTNIGHTLY exclusively. A liberal number of extra copies will be furnished authors, and reprints may be obtained at reasonable rates, if request accompanies the manuscript. Engravings from photographs furnished free.

Contributions, and books for review, should be sent to the Editors, 312 Century Building, St. Louis.

☞Signature of contributor, for reproduction, should be sent with every article, on a separate slip; use heavy ink, and allow autograph to dry without applying blotter.

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A Case of Multiple Chancres.

BY A. H. OHMANN-DUMESNIL, M. D.,

ST. LOUIS.

Read before the St. Louis District Medical Society, December 19th, 1899.

ONE of the points of differentiation between chancre and chancroid, as pointed out by all teachers and taught in all text-books, is that the former is single, and the latter frequently multiple. Exactly the reverse forms the exceptions. This being the case, he who is not versed in venereal diseases is very apt to have his ideas confused, and occasion a hesitation in formulating a diagnosis, or rush into a reckless course of pronouncing every one syphilitic, and place the patient upon constitutional treatment, whether it be required or not. The chancroid, which is seen early, is usually single, and remains so. If multiple, the different lesions appear successively, and, with the exception of the first, are the result of auto-inoculation. In addition to this, they have different ages; or, in other words, they succeed one another until the process of inoculation is stopped. On the other hand, the multiple chancre, which is as far from being as rare as some would have us believe, manifests itself by the exhibition of a number of chancres, which show themselves simultaneously. In other words, they are of the same brood. The inoculation occurred at the same moment, and no auto-infection took place, or could do so. I do not intend to refer, in this place, to the induration of the initial lesion, the peculiar adenopathy, nor to the other signs which so plainly indicate to an expert the fact that a syphilitic infection is present.

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My purpose is simply to present a short clinical record of a case possessing some few points of interest. Briefly stated, the case is as follows: Henry M., a negro teamster, of 29, born in St. Louis, and married, presented himself at my clinic, July 6, 1896. He was muscular, well built,

and bore no marks of dissipation. He stated that both his parents were living and healthy. Family history was good. He acknowledged that he chewed and smoked tobacco, and that he was fond of gin, but only drank it occasionally. His skin was very dark and well provided with subcutaneous fat. The pilous system was well developed.

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He strenuously denied having had any illicit intercourse. He stated, however, that a month before he came to the clinic, he noticed some "bumps" on his penis, but paid little attention to them, as they "didn't hurt." When they grew to their present proportions, however, he became frightened, and concluded he had better see a physician. When I saw him there existed five distinct chancres. One was located on the glans, a little to the left of the median line, and four involved the prepuce, encroaching upon the balano-preputial fold and surrounding the corona. The sizes of these chancres varied. One was the size of a silver dime, one that of a half-dime, and the remainder about that of a split pea. (See figure). All were painless to the feel, and each one exhibited a classic cartilaginous induration. There could exist no possibility of a doubt which it had occurred, would have been immediately dispelled by the indurated inguinal glands, as well as the posterior cervical and epitrochlear adenopathy.

At this time he had a pustular eruption of the face, upper part of the chest and back, but he claimed to have always had acne, which remark was treated as being doubtful. Some two weeks later he presented a well marked varioliform syphilitic eruption of the scalp. The chancres were improving under the application of calomel powder. At this time there existed a typical syphilitic angina, and the tonsils were enlarged and swallowing was difficult. All of these symptoms rapidly disappeared under the administration of the following:

℞ Hydrarg. bichloridi..... gr. iv
Ammon. muriat..... gr. viii
Aquæ distillat..... ℥ iv
M. Sig.: A teaspoonful in water after each meal.

This seems to be the record of a very simple case, and yet one not possessed of the skill to differentiate an induration from an old infiltration might be led into a mistake, either to look upon the case as chancroids, because multiple, and believing the patient's assertion so far as his eruption was concerned, and, perhaps, disregarding the induration of the glands as not sufficiently marked. Or, in an old case of chancroids, mistaking the old infiltration for an induration, and jumping at a false conclusion at sight of an undoubted acne. The country practitioner, who has not the opportunities of the city physician, is usually more careful in formulating a diagnosis, because he hesitates to stamp any one with the stigma of being syphilitic unless he is certain. The city physician, in but too many instances, is so avid for money that he often makes but a superficial examination and pronounces himself positively. Intelligent patients will not remain satisfied with this, but desire a thorough examination before they will submit to a verdict, which they look upon almost in the light of a death-warrant. Did time permit I would detail a few cases illustrative of the unsatisfactory results due to superficial examination of cases. Suffice it to say for the present, that those physicians are most skilful and successful in their practice who are most careful in the examination of their patients.

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PHYSIOLOGY.*

BY A. L. BENEDICT, A. M., M. D.,
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CHAPTER XXX.—REFLEXES, MAINLY DUE TO THE PNEUMOGASTRIC NERVES.

The pneumogastrics are concerned in a number of reflex phenomena, whose function is especially to protect the respiratory and alimentary passages from injury. Such protective acts are, obviously, expulsive and depend mainly on the action of the diaphragm, whether to empty the respiratory or alimentary passages. It is convenient to consider with these protective, expulsive (and, therefore, expiratory) reflexes, certain others that are mainly inspiratory. The normal ingestive processes of respiration and deglutition have already been considered.

	Expiratory reflexes.	Inspiratory reflexes.	
Primary protective.....	Vomiting	Swalllowing	Gastric
Abortive vomiting.....	Retching, Gagging, Puking	Air-swallowing	Gastric
Abnormal, but of frequent occurrence	Belching, Water-brash, Rumination		Gastric
Laryngeal construction.....	Cough	Hiccough	Respiratory
Nasal obstruction.....	Sneeze	Sniff	Respiratory
Audible vibration of oro-pharyngeal cavity.....	Laugh	Sob	Respiratory
	Crying is laugh or sob plus lachrymation.		Respiratory
Laryngeal obstruction prolonged.	Strain		Respiratory
Prolonged inspiration with general flexor spasm.....		Yawn	Respiratory

Both inspiratory and expiratory—(single) sigh ; (repeated) panting.

Vomiting, in the simplest form, is a reflex in which the primary stimulus is an irritant—food or drug—in the stomach. The efferent impulse travels by the gastric fibres of the pneumogastric. The efferent impulses are multiple: (*a*) along gastric fibres of the pneumogastric to cause contractions of the stomach muscle, in order to produce expulsive efforts ; (*b*) to cause contraction especially of the oblique muscular coat of the stomach, in order to open the cardia ; (*c*) inhibitory impulse to the cardiac sphincter; (*d*) along secretory fibres of the pneumogastric and perhaps associated nerves, to cause an outpouring of œsophageal, pharyngeal and salivary secretions, so as to lubricate the passages, even the tracheal and bronchial secretion often being increased; (*e*) motor impulses along the phrenics and

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other respiratory nerves, to cause, first, a deep inspiration, and then contraction of the expiratory muscles, the abdominal muscles and diaphragm being the most important. Along with the excito-reflex impulses, there is usually a sensory impression of nausea and prostration, and along with the efferent impulses there is usually pneumogastric inhibition of the heart, so that the skin become surcharged with blood, and a cold, clammy perspiration occurs. At times, the effect on the pneumogastric cardiac branches is so marked that, instead of stimulation, weakening of control occurs and the heart beats rapidly. Vomiting may also be due to afferent stimuli from other than the gastric branches of the pneumogastric, or even from remote nerves. Irritation of the pharynx by the finger, of the bile-ducts by calculi, of intestine by obstructive conditions or by severe inflammations, of the pancreas, etc , by various diseases, are illustrations of non-gastric pneumogastric excito-reflex stimuli, while the vomiting of ovarian and uterine disease, and, perhaps, that due to the passage of renal calculi are examples of remote reflexes. Even olfactory, optic, gustatory and equilibratory disturbances may act as excitants of vomiting. Stimulation of the auditory nerve is not usually competent to produce vomiting, unless the cerebrum becomes generally fatigued, as by prolonged cannonading, or other loud sounds, or unless the auditory stimulus acts through a mental center by reason of the disgusting nature of what is heard. In centric vomiting there is no excito-reflex stimulus from the periphery, but some nauseating memory, or the direct stimulation of the vomiting center in the medulla by a poison, such as apomorphine or some of the toxins of disease, produces the efferent discharge.

Retching differs from vomiting in that the cardia is in a state of spasm, so that the stomach cannot empty itself. Generally speaking, more serious gastric and intestinal diseases occur in animals and human beings that do not vomit easily than in those that do.

Gagging is chiefly due to afferent stimuli from the pharynx or to mental conditions arising from memory, or due to the special senses. It consists, efferently, in pneumogastric stimulation of the elevators of the root of the tongue and the larynx, as in swallowing, and there is a violent inspiratory effort with the glottis closed, as in hiccough, so that air enters the œsophagus. Gagging usually precedes vomiting and retching. When repeated, gagging is, of course, interrupted by expiration which is usually audible, and accompanied by a groan.

Puking is the vomiting of infants. There is, apparently very little, if any, nausea and no gagging. The gastric cavity being small and the gastric muscle relatively and absolutely stronger than in adults, little assistance from the diaphragm and abdominal muscles is needed, and the stomach simply "spills over" by its own contraction.

Belching is partly a purely mechanical eructation of gas from the stomach, by its own expansive force, but there is also an active forcing up of the gaseous contents of the stomach, with inhibition of the cardiac sphincter, etc., just as in vomiting of solid and liquid food, except that there is not usually so much nausea or disturbance of the vasomotor system.

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Water-brash, or pyrosis, is the same as belching, except that acid gastric juice or gastric contents are brought up in small quantities and with very little nausea.

Rumination, a normal process in certain animals, occurs exceptionally in human beings. It is the same as puking, with slight assistance from the diaphragm and abdominal muscles, and far from being accompanied by nausea, it is described as a source of great pleasure.

Air-suction or swallowing, is similar to gagging, but without nausea. It occurs mainly in hysterical females, and may continue several hours, alternating with belching of the swallowed air.

Coughing is usually produced by an irrespirable gas, drop of liquid or solid particle in the larynx, the excito-reflex current being conducted by the superi or laryngeal branch of the pneumogastric. Accumulated material in the lungs does not cause cough till, by full respirations and the action of cilia (see under Contractile Tissues), the mucus or other material has reached the larynx. Touching the pneumogastric area in the nostril and irritation of the tympanum, as in removing cerumen from the ear, produces the same reflex cough. Wounds of the pleura and tension on the pleura, as during the withdrawal of pleuritic fluid, usually produce cough. Reflex cough may also arise from afferent impulses from distant branches of the pneumogastric, as in disease of the stomach, hepatic calculus, renal calculus, etc., or from other nerves, as those of the ovary. The motor phenomena of cough consist in a preliminary deep inspiration, due to efferent impulses along the various respiratory nerves, then closure of the glottis due to impulse along the inferior laryngeal, and finally, a violent expiration bursting the glottis open, and usually dislodging the irritating substance.

Hiccough, usually originates in an irritation of the pharyngeal and œsophageal branches of the pneumogastric, as from muscular cramp following hasty deglutition, or deglutition without proper moistening of the bolus, but may also arise from gastric disease, gall stones, etc. Efferently, it is exactly the opposite of a cough, there being a preliminary expiration, the glottis closing and being burst open by inspiration, some air usually being drawn into the œsophagus.

The sneeze resembles the cough, except for the location of the irritation and the explosion. The original irritation usually affects the fifth cranial nerve, either on account of particles of dust, or irritating vapors in the nostrils, or of dust and wind affecting the nerves of the conjunctiva, or it may be due to bright light through the optic nerve. The motor part is the same as for cough, except that the closure is of the posterior nares by the palatal muscles. (Text-books on physiology almost, or quite unanimously overlook the explosive character of the sneeze.)

The sniff, often purely automatic in the sense of being a habit, or voluntary, is produced reflexly by an accumulation of fluid, usually mucus, sometimes food or drink, in the nares. It is the reverse of the sneeze, except that the nares are not always closed and exploded. Voluntary sniffing lacks the element of closure of the nares by the palatal muscles.

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Laughing consists of a series of short expiration, with the mouth open and the pharynx in the position for pronouncing H. The vowel tone differs according to individual habit. The laugh is due to any afferent impulse or memory, which produces an idea of the incongruous or ludicrous. Why this particular reflex should be the result is not explained. A voluntary attempt at laughing is not usually successful. The laugh is almost invariably —except in facial paralysis—accompanied by a smile, which consists in a contraction of the risorius. The reflex smile is explained on the theory that the original pleasurable sensation is the ingestion of food, in preparation for which, the mouth is opened.

Sobbing is the reverse of laughing, the movements being inspiratory. The aspiration and vowel tone are not distinct, inspiratory speech being rare, and the mouth is not always open.

Crying is either laughing or sobbing plus lachrymation.

In straining, which is mainly a spinal cord reflex, the exciting cause is the irritation of the inferior spinal nerves by the passage of contents from the bladder, rectum or uterus. The reflex motor phenomena consist in preliminary deep inspiration, closure of the glottis and prolonged expiratory contraction, chiefly of the abdominal muscles, without opening of the glottis till a second inspiration has to be taken. Straining is almost invariably present in expelling the uterine contents, frequently with expulsion of faeces, rarely with expulsion of urine in normal individuals. Tenesmus, frequent in inflammation of the lower bowel, less common in inflammation of the bladder, rare or never occurring from a uterine reflex, consists in a series of excito-reflex impulses to straining, without there being a substance to expel.

Yawning is due to a drowsy condition, produced by any means, with the realization of the necessity of action or thought, the motor cells of the cerebrum being in a semi-dormant state. The motor phenomenon is a prolonged inspiration, accompanied by a wide opening of the mouth. and usually by a general tonic contraction of most of the extensor muscles, with which the depressors of the jaw and the inspiratory muscles may be included.

Panting, not referring to the evaporation of saliva by dogs, is usually due to great fatigue, fear or pain. The afferent impulse may be carried by a great variety of nerves. The motor phenomena consist in quite deep and rapid respirations, so that an excess of oxygen is taken into the lungs, and thence into the blood, apparently acting both as a stimulant and an anæsthetic.

CHAPTER XXXI.—THE SYMPATHETIC SYSTEM.

The sympathetic system consists of :

"1. A double chain of ganglia and fibres, which extends from the cranium to the pelvis, along each side of the vertebral column, and from which branches are distributed both to the cerebro-spinal system and to other parts of the sympathetic system. With these may be included the small

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ganglia in connection with those branches of the fifth cranial nerve which are distributed in the neighborhood of the organs of special sense; namely, the ophthalmic, otic, spheno-palatine and submaxillary ganglia.

2. Various ganglia and plexuses of nerve-fibres, which give off branches to the thoracic and abdominal viscera, the chief of such plexuses being the cardiac, solar and hypogastric; but in intimate connection with these are many secondary plexuses, as the aortic, spermatic, and renal; to these plexuses fibres pass from the prævertebral chain of ganglia, as well as cerebro-spinal nerves.

3. Various ganglia and plexuses in the substance of many of the viscera, as in the stomach, intestines and urinary bladder. These, which are, for the most part, microscopic, also freely communicate with other parts of the sympathetic system, as well as to some extents with the cerebro-spinal."—*Kirke's Physiology.*

Except in the visceral cavities, and even here to a large degree, sympathetic nerves follow blood vessels, and are mainly distributed to the muscular coats of the arteries and veins, especially of the arterioles. Hence, in the limbs and body-wall, most of the sympathetic nerves are vaso-motor. Most of the grey fibres connecting the sympathetic ganglia with the spinal nerve roots are vaso-motor in function. The functions of the sympathetic system are subordinate to centers found mainly in the spinal cord, these latter centers being controlled by more general centers in the medulla oblongata. Thus, there is no such thing as a sympathetic center, while the free communication between the spinal cord and the sympathetic ganglia as well as the occurrence of essentially vaso-motor and glandular fibres in nerves of the cerebro-spinal system—especially in the pneumogastric, and the nerves of the face supplying the lachrymal and salivary glands and the intrinsic muscles of the eye—establish the real unity of the whole nervous system, the subdivisions into cerebro-spinal and sympathetic being retained only as a matter of convenience. The corpuscles of the sympathetic system attach to fibres of only one function, so that no reflex action is possible in this system alone, the switching from afferent to efferent neurons being accomplished in cerebro-spinal centers.

The functions of the sympathetic system are:

1. Circulatory regulation, including motor and inhibitory fibres to both the vessels and the heart. For most of the blood vessels, only vaso-constricting fibres can be demonstrated, though it is probable that vaso-dilatation is not entirely a passive process. Erectile tissues contain demonstrable vaso-dilating fibres while the increased flow of blood to the salivary glands is due to vaso-dilating fibres in the chorda tympani and small petrosal nerves, and also illustrates the close connexion of the cranial with sympathetic nerves. The heart beat is increased in rapidity by accelerating fibres of the sympathetic and slowed by the pneumogastric. The former process has been considered analogous to vaso contraction, the latter to vaso-dilatation or inhibition, but the actual contractile force of the heart is increased by the pneumogastric and decreased by the accelerator. The

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receptaculum chyli and larger lymph vessels are controlled by the sympathetic system.

2. Viscero-motor and inhibitory fibres control the smooth muscle of the alimentary canal, uterus, and other parts of the body. The stomach and upper intestine are supplied mainly through the pneumogastric. Just as the movements of the heart are regulated by intrinsic ganglia, so Auerbach's plexus, containing numerous minute sympathetic ganglia controls the muscle of the bowel and similar ganglionic plexuses are distributed to other organs. Injury to such plexuses, reflexly lowers the nutrition of the body, and, if acute, may cause shock, which is mainly a paralysis of the smooth muscle of the arterioles. Blows on the abdomen are particularly dangerous, from their direct effect on the solar plexus and the depressing influence of laceration of the cervex uteri is said to be due largely to involvement of the cervical sympathetic plexus in scar tissue.

3. Secretory and corresponding inhibitory fibres control all visceral secretion. Meissner's plexus in the submucous coat of the intestine and similar ganglionic visceral plexuses, are largely connected with the regulation of secretion, absorption, etc.

CHAPTER XXXII.—SPINAL CORD.

In contradistinction to the nerves, which are peripheral parts of the cerebro-spinal system, the spinal cord and brain are termed central nervous organs. The medulla oblongata or bulb is sometimes classed with the cord, sometimes with the brain, sometimes by itself. As a matter of development, the brain is simply the anterior expansion of the cord. It has already been explained that the sympathetic system has no center apart from the centers of the cerebro-spinal system. Beside ordinary connective tissue, the central nervous organs contain neuroglia, spider-like cells of epithelial origin, serving to support the nerve corpuscles. In the brain and cord, white and grey matter are distinguished, the former consisting of medullated fibres, the latter of cells and intercentral fibres. While the grey matter of the brain matter of the brain is mainly external to the white, that of the cord is internal, forming an H, with two anterior and two posterior horns. Except for comparatively narrow anterior and posterior commissures which, together, comprise the cross-bar of the H, the spinal cord is divided into lateral halves by anterior and posterior median fissures and by the central canal, which is a minute tube, lined with ciliated epithelium and terminating above in the fourth ventricle. This canal has no function, but is a vestige of the embryonic development of the central nervous system from an infolding of a tube of epiblast.

The white matter of the cord consists of medullated fibres running longitudinally. By histologic study, especially of the embryo at various stages of development, and by tracing the course of degeneration of cut fibres, the white matter has been divided into tracts or columns. Partly by experiments upon animals, and partly by comparing the symptoms of human beings with cord diseases with the findings at necropsies, the functions of these tracts have been quite accurately determined. The position of the tracts is indicated in the diagram.

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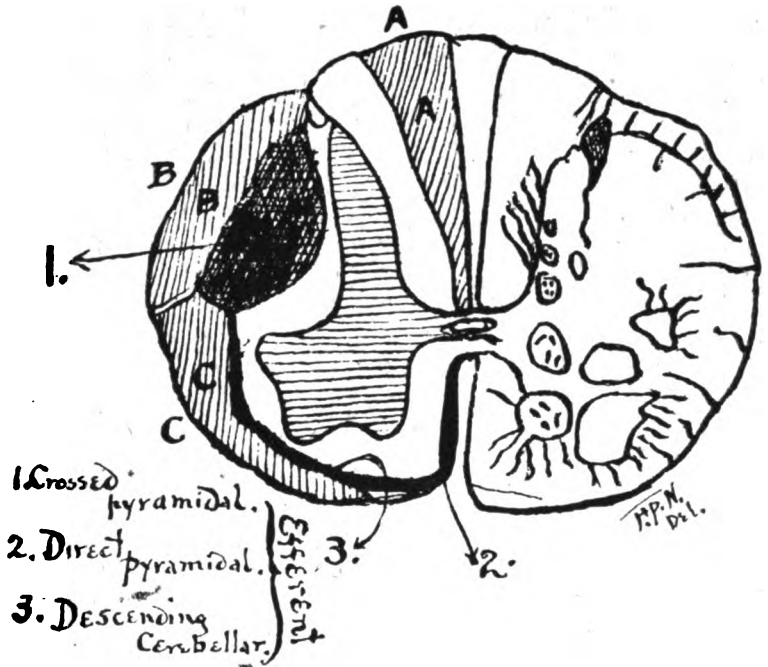

Diagram of Spinal Cord. Right side (left of figure) showing white tracts. Left side (right of figure) showing grey tracts.

Efferent white columns:

1. Crossed pyramidal tract, and

2. Direct pyramidal tract, comprise the motor pathways for impulses from the cerebrum to the voluntary muscles. Whether other efferent impulses are carried by these tracts is not known. No difference is known between the functions of the two tracts. The former is the larger and consists of fibres, which cross from one side to the other, in the decussation of the pyramids just below the medulla, and which communicate with the cells of the anterior horn of the same side. Most of the fibres of the direct tract cross at their lower end to the opposite anterior horn.

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3. Descending cerebellar tract. This consists of uncrossed fibres from the lateral lobes of the cerebellum, and seems to act to insure equilibrium and co-ordination.

Afferent white columns:

1. Posterior median increases in size from below upward, and terminates in the nucleus gracilis of the medulla. It undoubtably consists of excito-reflex fibres, experiments and observations of disease showing that it does not convey ordinary sensory impressions.

2. Dorsal or direct cerebellar, can be traced no lower than the upper lumbar nerves, and terminates in the vermis of the cerebellum. Its fibres seem to lead from the cells of the postero-median grey column.

3. Ventral cerebellar, extending nearly the entire length of the cord, leads to the dentate nucleus of the cerebellum.

Intercentral white tracts:

1. Anterior root-zone, varies in thickness according to the size of the anterior nerve-roots, being largest in the cervical and lumbar regions. The downward degeneration of its fibres after section extends only a short distance, so that its function is supposed to be to carry impulses from one segment of the cord to those immediately below, thus insuring co-ordinated action of closely related parts.

2. Postero-external column includes (*a*) fibres from the posterior nerve-roots to the postero-median column, so that, physiologically, this belongs to the latter; (*b*) intercentral fibres, which constitute the greater part of the column, and correspond in number to the size of the posterior nerve-roots, and serve to connect one segment of the cord with those immediately above, being analogous to the afferent, motor root-zone.

In tracing the connexions of the grey matter of the cord, it is found that the processes from a cell do not actually unite with those of another, but come into close proximity. Thus, the conduction of nervous impulses is analogous to an induced electric current.

Efferent grey columns:

1. Anterior, cellular columns, mainly involved in discharging voluntary impulses or spinal motor reflexes into the anterior nerve-roots.

Afferent grey columns:

2. Posterior cellular column, probably receiving impulses from posterior nerve-roots, but not directly traceable therefrom.

3. Postero-median cellular column, best developed at the junction of the dorsal and lumbar regions, consisting only of scattered cells above the seventh cervical segment, connects with fibres of the dorsal cerebellar white column.

Intercentral neurons:

4. A column whose function is vaguely known, located in the lateral concavity between the anterior and posterior horns.

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The functions of the spinal cord are as follows:

A. Conduction. It is obvious that impulses between the brain and the parts supplied by the spinal nerves must pass through the spinal cord. No column of the cord, however, is merely a nerve trunk, for there is no instance of a fibre directly traceable from a cerebral cell into a spinal nerve, without the intervention of at least one spinal cell. In other words, conduction between the brain and the periphery always occurs over two or more neurons. Afferent conduction is not well understood, the more definitely located afferent columns leading to unconscious centers. Sensory impulses are carried either in the posterior and lateral columns, or through the grey columns. Experiments and the study of diseases are not decisive, as one afferent tract seems able to act vicariously for others, so that permanent sensory paralysis is very rare. Sensations of pain and temperature seem to cross immediately on entering the cord to the opposite side, while sensations of touch, pressure and equilibium, as well as muscular sense impressions are carried mainly on the same side at which they enter, crossing in the medulla or cerebellum.

Voluntary motor impulses, as already indicated, are carried by the two pyramidal tracts, most of them crossing at one point or another, so that the left side of the brain supplies the right side of the body and *vice versa*. A few fibres do not cross. More uncrossed fibres go to the legs than to the arms, and more to the trunk muscles, which habitually act in unison, than to the limb muscles. Thus, unilateral cerebral disease is usually followed by more complete paralysis of the arm than of the leg, while the trunk is little affected. It should be remembered, however, that the trunk centers in the cerebrum are less liable to disablement than those controlling the limbs. The degree of crossing of fibres seem to differ in different individuals.

The conduction of the cord is partially established by the following experiments and observations of disease:

1. Complete section or absolute pressure paralysis produces loss of sensation and of voluntary control in the parts supplied by nerves arising below the plane of interruption. In pressure paralysis, however, the muscular sense is especially tenacious. Functions presided over by the cord itself are not abolished.

2. Unilateral section of the cord produces loss of voluntary motion, inferiorly, on the same side. According to older experimenters, sensation was lost on the opposite side. According to recent authorities, the loss of sensation is mainly on the same side, but is only temporary. Complete unilateral pathologic lesions are practically unknown.

3. Section or disease of the antero-lateral columns, involving the anterior horns, produces motor paralysis, sensation remaining nearly normal. If only one side is affected, as is usually the case in disease, the paralysis involves the same side of the body, and is usually quite limited. In disease affecting the lateral white columns, the grey matter being normal, there is no paralysis, but the movements are inco-ordinated and are apt to be spastic.

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4. Section or disease of the posterior column is followed by imperfect voluntary movement, apparently due to interference with the muscular sense and afferent impulses controlling co-ordination. Disease may be attended by exaggeration, diminution or slowness of conduction of sensations of pain, temperature, touch, etc., probably from simultaneous involvement of the posterior roots.

That conduction is not the only function of the spinal cord is shown by the mere anatomic fact, that not half the fibres that leave through the spinal nerve roots can be accounted for in the upper portion of the cord. In general, a column that increases from below upward or from above downward, regularly, is a conducting column.

B. Reflex Action and Inhibition of Voluntary Muscles. After paraplegia (paralysis due to interruption of conduction by the spinal cord), tickling and other irritations may still produce quite marked reflex movements of voluntary muscles. Many reflexes of this nature are habitually inhibited by the brain, so that in paralysis, or during sleep, the reflex response may be more energetic than normally. In the lower mammals, paralysis from spinal injury does not appear to be so complete as in man, because the cord has relatively a greater control of the voluntary muscles. In cold-blooded animals, like the frog and snake, complex and apparently intelligent movement may take place after decapitation. Such movements do not take place spontaneously, but may arise from slight reflexes which, in higher animals, would be capable of producing only slight and ill-regulated movements.

C. Special functions, conbining the action of voluntary and involuntary muscles. Defaecation, micturition, expulsion of the contents of the uterus, ejaculation of semen, erection of the penis and clitoris are under control of centers in the lumbar enlargement of the cord. The reflex mechanism of these processes has already been alluded to except the ejaculation of the semen, which differs little from micturition, except in the nature of the afferent impulse, and the fact that the muscular fibres of the vasa deferentia and vesiculæ seminales are involved instead of the wall of the urinary bladder, in the efferent effort. Certain unexplained inconsistencies exist, however, in regard to these reflexes. Thus, spinal paralytics show very little interference with defaecation, child-birth and ejaculation of semen, except the inconveniences due to sensory paralysis and helplessness. On the other hand, micturition is very apt to be interfered with, so that catheterization is necessary. Spinal paralysis often includes an irritable state of the sexual centers, so that constant and, perhaps, painful erections exist, constituting priapism. The inhibitory role of the brain, as a matter of custom, is shown by the fact that defaecation and micturition under anesthesia are very common in experiments on the lower animals, quite rare in operations on human beings. The same inhibition is shown by the fact that reflex irritation which would produce micturition in animals or in children, during sleep, does not usually do so in adults, though emission of semen may result from the afferent impulse naturally intended to produce micturition.

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D. General muscular tonus, both of the voluntary and involuntary muscles, and especially of the arterioles, is presided over by the spinal cord. While cerebral paralysis causes little more atrophy of voluntary muscles than can be explained by disuse, spinal paralysis results in marked atrophy and degeneration, even involving the bones and joints. Vasomotor tonus also involves the matter of perspiration, sweating occurring if the arterial tension is generaliy diminished. The upper portion of the spinal cord contains centers which control the iris, the accelerating influence over the cardiac muscle and, in general, the various spinal accessory functions of the pneumogastric. Trophic function and regulation of arterial tone cannot be separated practically. General muscular tone, including that of the blood vessels, is destroyed by removing or seriously injuring large areas of skin. Hence, it has been said that this function depended on reflexes from the skin, but the shock from extensive burns, etc., may explain the disappearance of the regulating action of the cord. The supra-renal capsules secrete a substance which acts, whether centrally or locally, to maintain the tone of unstriped muscle.

E. Secretory control. Probably the nerve centers which control the chemic and physical functions of the various viscera reside in the spinal cord, but we have no definite knowledge about them.

Dr. Joseph C. Mulhall.

The following resolutions were passed by the faculty of the Beaumont Hospital Medical College as an expression of their regard for the late Dr. Mulhall, who was one of their number:

WHEREAS, In the loss we have sustained by the decease of our respected friend and esteemed associate, Dr. Joseph C. Mulhall, we, the faculty of Beaumont Hospital Medical College, are desirous of testifying our respect for our departed member, and of expressing our earnest and sincere sympathy with the family in their great bereavement, and with the medical profession in the loss of one of their ablest and most enlightened fellows; therefore, be it

Resolved, That we express our sincere condolence to the family of our deceased confrere in this, their hour of affliction.

Resolved, That the Beaumont Hospital Medical College has lost one of its most valued and efficient teachers.

Resolved, That the entire medical profession, of which our departed fellow was a shining light, has sustained an irreparable loss.

Resolved, That these sentiments be duly inscribed in the records of the college, and that an engrossed copy thereof be presented to the family of the deceased.

MR. EDWARD PEARSON, who has been for a long time identified with the Fraser Tablet Mfg. Co., having in charge their affairs in so far as the St. Louis profession is concerned, has severed his connexion with that firm and is now representing the Searle & Hereth Co. of Chicago. We believe the new combination is one where both parties are to be congratulated, and it is a good thing for the profession at the same time.

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Complete Inspection of the Rectum by Means of Newer Mechanical Contrivances.

BY THOS. CHAS. MARTIN, M. D.,

CLEVELAND, O.

Teacher of Proctology in the Cleveland College of Physicians and Surgeons.

Abstract of paper read before the Mississippi Valley Medical Association.

THE newer mechanical means exhibited consisted of a set of protoscopes which are provided with obturators of peculiar form, of an illumination apparatus susceptible of adjustment in an infinite number of positions and of an improvement on the Yale chair, which facilitates the placing of the patient in the knee-chest posture, without requiring any movement on the part of the patient after he is properly seated on the chair. The improvement consists of an upholstered board attached to the left arm of the chair, and a mechanism controlled by a crank and lever, which form a part of the running gear. The anoscope exhibited is an inch and half in length, and is designed for the inspection of that part of the rectum which is surrounded by the pelvic floor. The proctoscope is ten centimeters long, which the essayist claims is of sufficient length to reach into the inflated rectum, and is not of so great a length as to obstruct a complete view of the rectal chambers, and yet it is of sufficient length to reach the promontory of the sacrum when the pelvic floor is displaced upwards by the proctologist's manipulations. Both of these instruments are two centimeters in diameter; this diameter having been determined upon as the result of calibration of more than one hundred normal ani. The diameter of the instrument is the same as the average painless expansion of the anus. The obturators have contracted necks, which constitute these instruments ointment applicators. The middle part of the obturator is channeled; this qualifies the instrument as a nozzle for rectal irrigation. Because of its contracted neck the obturator may be a self-retaining nozzle. The surface of the obturator is fluted in such a manner that it may be used as a two-way irrigator when properly fixed within its tube. The technic of the inspection is as follows: The patient is required to sit on the chair with his legs crossed, and his body facing the knee-board, which is attached to the left arm of the chair. The chair-back is changed to the horizontal by a movement which puts the patient in the Sim's posture. The fixed rectum is now examined by means of the short anoscope. After this portion of the rectum is inspected the chair's lever is extended, its crank turned, and the chair tilted to such an extreme degree of the oblique lateral position, that the chair-seat is almost perpendicular, and the knee-piece, which is a part of the left arm of the chair, and against which the patient's knees are pressing, is almost horizontal. Now, at a time when the patient is resting easily in a new posture, which is equivalent to the knee-chest posture, the proctoscope is introduced, the obturator withdrawn, and the inspection of the ballooned-gut completed. The patient is returned to his feet by executing in the reverse order the several steps of this procedure.

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Report of Germicidal Powers of "Salo" (Tilden's).

BY R. B. H. GRADWOHL, M. D.

ST. LOUIS,

Bacteriologist to St. Louis City Hospital.

PIECES of silk thread, previously sterilized by dry heat, were inoculated with a bacterial suspension of bacillus typhosus, bacillus pyocyaneus, staphylococcus pyogenes aureus and the bacillus anthracis. The silk threads were then allowed to dry and were then exposed to the action of the various bacteria just mentioned. After exposure for varied periods of time ranging from fifteen to sixty minutes, the threads were washed in sterilized water to remove the superfluous disinfectant, and were then dropped into sterile, neutral bouillon tubes. These tubes were then placed in the incubator at 37 C. for forty-eight hours, were then removed and presence or absence of cultures noted; cover-glass preparations from each tube were also made, in order to ascertain the presence or absence of living bacteria in them. The results are as follows:

(+ means that growth took place after exposure to the disinfectant; — means that no growth occurred.)

BACILLUS TYPHOSUS.

After 25 minutes' exposure to salo..... +
" 45 " " " ..... —
" 60 " " " ..... —

BACILLUS PYOCYANEUS.

After 10 minutes' exposure to salo..... —
" 30 " " " ..... —
" 60 " " " ..... —

STAPHYLOCOCCUS PYOGENES AUREUS.

After 10 minutes' exposure to salo..... +
" 20 " " " ..... —
" 40 " " " ..... —

BACILLUS ANTHRACIS.

After 30 minutes' exposure to salo..... +
" 60 " " " ..... +
" 120 " " " ..... —

From the above report, it can be seen that the salo is effective as a germicide for the above-mentioned micro-organisms. It killed the typhoid bacillus in 45 minutes; the bacillus pyocyaneus, or produced or green pus, in 10 minutes; the staphylococcus pyogenes aureus, or golden-producing pus germ, in 20 minutes. It did not destroy the anthrax bacillus, the most resistant micro-organism with which we have to deal, in one hour, but exposure to salo for two hours killed that germ.

City Hospital, St. Louis, January 17, 1899.

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PHILADELPHIA LETTER.

[SPECIAL CORRESPONDENCE.]

In the light of Philadelphia's typhoid statistics of last winter and spring, the tardiness of our councils and Bureaus of Water and Engineering in making immediate use of the $12,000,000 voted by the people for the improvement of our water supply seems little short of criminal. It might not be unprofitable for our City Father to read and ponder well the discussion at the last meeting of the American Society of Civil Engineers following Mr. Allen Hazen's report of the results obtained from the new infiltration plant recently established at Albany, New York. They might also profitably turn their attention to Dr. E. B. Godfrey's recent paper before the Camden Medical Society. Camden is across the river from Philadelphia, and has, until now, taken its water from the Delaware. As some of our experts have advocated the use of Delaware instead of Schuylkill water, it is of no little interest to note Dr. Godfrey's report of a reduction of 62 per cent in the typhoid cases of Camden since artesian has been substituted for Delaware water. Artesian water is the product of the most perfect natural filter. Of course it can hardly be expected to find an artesian supply equal to the daily demands of a million and a half of people, but the lesson pointed is that infiltration, artificial or natural, is the only method of dealing with a polluted water supply.

The large membership present at the last meeting of the Philadelphia County Medical Society were treated to a royal discussion of appendicitis, participated in by Drs. Deaver, Price and Hearn. It was all precipitated by Dr. Hearn's paper on "The Mortality of Appendicitis," in which the doctor showed a fatality of about 8 per cent in a series of 114 unselected cases operated at the Jefferson Hospital. In the discussion of the paper, Dr. Mordecai Price reported about the same relative fatality in his own and his brother's (Dr. Joseph Price) practice, and stated his belief that with perfection of technique (especially as touching the most perfect flushing of the abdomen with boiled water), the present generation of surgeons ought to see the death-rate brought down to 2 per cent, and even to 1 per cent. He could not understand why Dr. Deaver's fatalities at the German Hospital had reached to nearly 20 per cent. In replying, Dr. Deaver explained that this 20 per cent applied to acute cases, in which all manner of peritoneal as well as general complications were present. In chronic cases (that is free from ordinarily fatal complications) he had done 156 consecutive operations without a death. Dr. Deaver argued against entering the abdomen through the great flat muscles of the belly, preferring—on anatomic grounds and as a safeguard against post-operative ventral hernia—to place his incision at the edge of the rectus muscle. He was not overfond of irrigation, although it was plain to be seen that he did a most thorough operation, and provided the utmost drainage, in which method he was quite at one with both Drs. Price and Hearn. Both of the latter gentlemen, however, seemed to believe more in flushing out the abdomen after the operation. In closing, Dr. Hearn reaffirmed his faith in an incision placed about an inch from and par-

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allel with the anterior crest of the ileum, contending that when the head of the cæcum fell against the closed wound, there was practicaliy no chance for the small intestine to find the weakened spot in the abdominal wall. There was perfect agreement as to the advisability of operation at the earliest possible moment. The whole discussion was one of the most animated heard on the floor of the society in months.

No little interest attaches to the paper of Dr. W. G. Spiller, presented at the late meeting of the Neurologic Society, in which the doctor, after a post-mortem study of the degenerations in an uncomplicated case of amyotrophic lateral sclerosis, offered a new map of the commonly accepted geography of the motor region in the cerebral cortex. So far, there have been reported in literature but ten cases in which degeneration methods have been employed to trace out the motor paths and their expansion in the cerebral cortex. Dr. Spiller finds the ascending parietal convolution partially motor, as well as sensory in its functions. Indeed, at almost every point his results correspond very closely to the scheme recently shown by von Monakow based on the findings of Starr, Keen, Horsley, von Monakow himself, and many others. W. R.

A Clinical Study of Twenty-four Cases of Paralysis Agitans, With Remarks on the Treatment of the Disease.—Concerning the treatment of this affection, Collins and Murkens (*New York Med. Jour.*, July 8, 1899) have the following to say: Although no known drug has any influence on the course and termination of the disease, there is much that can be done to lessen the patient's suffering and prolong his life. Dietetic and disciplinary treatment are of great value, as shown by the amelioration of symptoms in hospital cases. The patient should lead a quiet life in the country or suburbs. The diet should be of a simple, strengthening kind, and the digestive functions should be kept in good condition. Lukewarm baths are soothing, especially when the water is applied by the hand of the attendant and accompanied by friction. Massage, as well as this treatment, lessens the spasticity, improves nutrition and enables the patient to rest. Electricity is useless. The symptoms are usually temporarily improved under any new treatment. Hyoscyamus and duboisine are the most important drugs, but opium, cannabis, indica, etc., are sometimes of use. The sulphate of duboisine, in doses of $\frac{1}{100}$ to $\frac{1}{60}$ gr. two or three times a day is considered preferable to hyoscyamus on account of the disagreeable symptoms following the use of the latter. If toxic symptoms appear the drug should be stopped at once. Opium should be used when necessary to relieve sleeplessness. The salicylates are useless and the bromeides harmful in this affection. Gelsemium and veratrum viride sometimes do good in cases not benefited by hyoscyamus and duboisine.

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Reports on Progress.

COMPRISING THE REGULAR CONTRIBUTORS OF THE FORTNIGHTLY DEPARTMENT STAFF

GENERAL SURGERY.—C. E. Black, M. D., Jacksonville, Ill.
DISEASES OF THE CHEST—W. W. Bulette, M. D., Pueblo, Colo.
INTESTINAL AND RECTAL SURGERY—S. G. Gant, M. D., New York City
DISEASES OF THE MIND—Frank C. Hoyt, M. D.
RHINOLOGY AND LARYNGOLOGY—John A. James James, M. D.
GENITO-URINARY SURGERY AND SYPHILOLOGY — Bransford Lewis, M. D.
OPHTHALMOLOGY—J. Ellis Jennings, M. D.
ORTHOPEDIC SURGERY — Phil. Hoffman, M. D.
GYNECOLOGY—Josephine Milligan, M. D., Jacksonville, Ill.
OBSTETRICS—R. B. Murphy, M. D.
MEDICINE — Frank Parsons Norbury, M. D.
CLIMATOLOGY—Hubert Work, M. D., Pueblo, Colo.
PATHOLOGY AND BACTERIOLOGY—Rutherford Gradwohl, M. D.
PARIS CORRESPONDENT — Thomas Linn, M. D., Paris, France.
NEW YORK CORRESPONDENT -- E. Franklin Smith, M. D.
LONDON CORRESPONDENT — R. T. Hewlettt, M. D., M. R. C. P., Chief Bacteriological Laboratory, Jenner Institute of Preventive Medicine, London.

OPHTHALMOLOGY.

IN CHARGE OF J. ELLIS JENNINGS, M. D.

ST. LOUIS.

Surgical Treatment of High Myopia.—H. V Wurdeman (*Jour. of the Amer. Med. Assoc.*,, December 9. 1899). Myopia of high degree is extremely rare. Thus of 5000 eyes examined only 29 (.58 per cent) have myopia over 10 D. The surgical treatment of high myopia consists in the removal of the lens by discission, and according to the author the indications are as follows: 1. Surgical treatment should be limited to those cases over 12 D, who suffer great inconvenience from their correcting lenses. The ideal cases for operation are those of 17 to 18 D. 2. The operation is mainly indicated in young adults. 3. Cases having active disease and changes in the ocular structures, such as progressive myopia, choroiditis, fluidity of the vitreous, or detachment of the retina, are not applicable. 4. The dangers of operative interference are more than counterbalanced by the results to be achieved, which are mainly increase of visual acuity and of the visual field, and more extended use of the eyes, which accompany diminishment of the refraction.

Extirpation of the Lachrymal Sac and Gland.—C. R. Holmes (*Archives of Ophthalmology*, No. 1, 1899). The indications for the removal of the tear sac and gland are: 1. In cases where it becomes necessary to operate upon the globe, as for cataract or glaucoma, especially so, should there not be sufficient time to carry out other methods of treatment. 2. In patient who cannot devote the time, or who may be unable to endure the treatment by probing. 3. In all cases where conservative treatment has

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failed to cure within a reasonable time. Although advocating the extirpation of the lachrymal sac and gland in suitable cases, I am a firm believer in conservative surgery, so long as milder means will accomplish the desired object, to wit, that before slitting the canaliculi and probing, thus lacerating or bruising a delicate and inflamed membrane, we should first thoroughly carry out antiphlogistic treatment in connection with careful attention to the nose and accessory cavities, which may embrace surgical measures, massage as advocated by Königshöfer, and cleansing of the sac by gentle syringing with mild astringents. And if, after this it becomes necessary to probe, let us proceed gently, so as not to make a false passage.

Description of a New Method for the Implantation of Glass Balls into the Orbital Cavity.—Charles A. Oliver (*Phila. Med. Jour.*, May 27, 1899). The procedure which in its latest details has given me the best results with the least amount of reaction (in fact frequently less than with ordinary enucleation), is practically as follows: The conjunctiva around the entire corneal limbus is freed from the globe and dissected sufficiently far back so as to expose the tendons of the four recti muscles. The tendinous extremities of the muscles are made ready for separation from the globe. A half-curved needle with its point directed toward the corneal border, and holding a long piece of catgut thread, is carried directly through the belly of the internal or the external rectus muscle, and brought out of the tendon of the muscle just behind the remaining attachment to the globe. The muscle thus secured is cut loose from the globe just as in ordinary tenotomy. The catgut thread is drawn through as far as practicable, and a sufficient length of the strand of gut is left untouched in order to allow a loop broad enough for free manipulation between it and the eyeball. The needle is carried over to the opposite side of the cornea, and, with its point directed away from the cornea, is made to transfix the tendinous belly of the other lateral muscle, which is secured and freed from its connection with the eyeball. The vertically-placed muscles are dealt with in a similar manner. The four recti muscles are thus freed from their tendinous attachments to the globe, and each pair of muscles is secured in a loose sling that can be tied the moment that this becomes necessary. Working in between the broad loops of catgut attached to the ends of the muscles that are held apart by an assistant, the eyeball is enucleated with as much of the optic nerve as may be desired, without any difficulty. The cavity previously occupied by the globe is thoroughly cleansed and a water-tight glass ball of about three-fourths of the size of the normal globe is dropped into place. The ends of the lateral rectus muscles which are held by the lower and the first placed catgut thread are neatly trimmed and sutured together. The same is done with the two ends of the vertical rectus muscles. The circular opening made by the cut edges of the overlying conjunctiva is lengthened into a lozenge by a couple of horizontal snips, and is carefully brought into linear apposition by a series of silk threads. The operative field is covered by a gauze protective-bandage upon which iced compresses are placed. If the operation be done under strict asepsis, without any undue violence, and the parts be kept thoroughly freed from blood-clots and loose or hanging tissue, and if iced compresses be employed for the first

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twenty-four or forty-eight hours after the procedure, there will be absolutely no reaction, and the surfaces will be ready for the insertion of an artificial eye in a very brief time—in fact, earlier than after an ordinary enucleation, while the cosmetic results will be as fully as good as those that are gotten by Mules' method.

MENTAL AND NERVOUS DISEASES.

BY FRANK PARSONS NORBURY, M. D.

Physician to Oak Lawn Sanitarium; Neurologist to Our Savior's Hospital; Physician to Passavant Memorial Hospital; Lecturer Psycho-Physics, Illinois College.

AND EGBERT W. FELL, B. S..

JACKSONVILLE, ILL.

Postanesthetic Paralysis.—(Editorial in *The Gaz.*, Dec. 15, 1899,)—Paralysis following anesthesia is attributed to the patient, to the agent employed. Mally, in the *Revue de Chirurgie,* Nov. 7, 1899, classifies such palsies as follows: (1) Those of central origin being due to hemorrhage. These are extremely rare. Patients have sclerosed blood vessels and apoplexy is liable to follow from the slightest cause. (2) Hysterical paralysis is also extremely rare and is attributable to the moral shock. (3) Peripheral palsies are the most frequent and important. They usually occur in the upper extremities and are due to pressure on branches of the brachial plexus caused by faulty position. The deltoid and supra and imfra-spinous are most frequently involved. Prognosis is good and recovery is the rule. (4) Reflex palsies are extremely rare and are characterized by exaggeration of reflexes and atrophy. Their occurrence is accidental. None of these are therefore due to the anesthetic, and the peripheral only is avoidable. Treatment consists of electricity, passive motion and massage.

Neurasthenia, Its Symptoms and Treatment.—(Gray, *Med. News* Dec. 16, 1899)—Neurasthenia is a depression of the functions of the nervous system. Either spinal or cerebal symptoms may predominate. The symptoms are those of impairment rather than perversion of function. The cause may be any depressing circumstance, or mental or physical overwork, worry, disease, masturbation, use of alcohol, morphine, etc. The occasional appearance of albumin sugar or casts in the urine may be due to neurasthenia. Uric acid is unimportant. The differential diagnosis from melancholia, hysteria, general paresis, bromism, etc., can be made by careful study of the symptoms. The prognosis is usually excellent. The treatment consists of removal of cause, rest, tonics and electricity. Prolonged confinement in bed is seldom necessary, ten or twelve out of twenty-four being usually sufficient. If anemia exists iron and quinine should be given, sometimes with strychnine. A pill of strych. sulph. gr. $\frac{1}{30}$, ferri. sulph. gr. ii, quin. sulph. gr. ii, after meals is recommended. Large amounts of beef should be given. If the patient is not anemic arsenic and strychnine are

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useful. In lithemic cases lithiated water should be given, glycero-phosphate of lime 15 to 30 grains daily has recently been advocated in France. Errors of digestion should be attended to. Hypnotics are not required. The mental diversion should be such as not to fatigue the patient. The author thinks electricity of great value if rightly used, and gives the method employed by himself. Massage is often of value.

The Differential Diagnosis Between Chronic Joint Diseases and Tranmatic Neuroses.—(Sayre, *Med. Rec.*, Dec. 20, 1899)—Mistakes in diagnosis are caused by failure to get the complete history, too superficial examination, and a lack of attention to minor symptoms. They can be avoided by noticing the following points: (1) Symptoms of nerve inflammation follow soon after the injury, while those of joint disease do not. (2) Atrophy follows nerve injury sooner than joint disease. (3) In neuroses the temperature general and local, is subnormal in inflammation of a joint, elevated. (4) In joint diseases involuntary spasm is always present. A limited amount of motion is usually possible. (5) Pain in joint inflammation is limited to definite and limited areas, in neuroses it often is not. Attention is called to the value of the presence of a neurotic disposition in making the diagnosis. The author gives reports of three cases of neuroses which had been diagnosed as joint disease.

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Calomel as a Diuretic in Cardiac Affections.—(Bourgeon, *Rev. de Therapeut*, August 15, 1899.)—The diuresis increases with the dose and stops on the withdrawal of the drug. The quantity of urine excreted varies from a pint to three quarts daily, depending on the individual, the nature of the trouble, and the degree of edema. Three to six grains should be given in one or two doses every two, three or five days, according to circumstances. The exact results of this treatment cannot be foreseen, and it should not be used until the usual remedies have failed. If albumin appears the calomel should be stopped.—From abstract in *Med. News*.

Heart Disease from an Obstetrical Point of View.—Wright (*Canadian Practitioner and Review*, December, 1899) summarizes his paper as follows: (1) A woman having a heart lesion, which is compensated, should not be prevented from marrying. (2) Abortion should not be induced, unless very serious symptoms are present. (3) Premature labor should seldom or never be induced. (4) Mitral lesion is the most serious heart lesion during pregnancy and labor; aortic stenosis next, aortic incompetency next; mitral insufficiency is the least serious. (5) Treatment during pregnancy consists in the administration of the following, according to indications: Strychnine, digitalis (or strophanthus), cathartics, nitrite of amyl, nitroglycerine. Diet should be regulated. (6) During labor keep up the action of digitalis, especially during the first stage. Give strychnine and stimulants, if required, and chloroform. As soon as the first stage is completed deliver with the forceps. Watch the patient during the third stage and for some days after.

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DR. RALCY HUSTED BELL and his journal, *The Raven*, are now located in St. Louis We are not surprised, Dr. Bell is a man who is progressive, and what is more natural than that he should come to the city which is ready to welcome any and all who are energetic. *The Raven* is not distinctly a medical journal, it is devoted to the philosophy of living as it appears to the editor, and he, being a medical man, emphasizes the medical aspect of things generally, and brings his journal within the elastic bounds of medical journalism. THE FORTNIGHTLY bids Dr. Bell and his journal a most cordial welcome.

CONGRESS ON "TUBERCULOSIS AND ITS MODERN TREATMENT.—From advance sheets of the *Medico-Legal Journal* it is learned that the Medico-Legal Society will devote an extraordinary session to "Studies on Tuberculosis, Its Management and Modern Treatment," on the third Wednesday of February, 1900, at a regular meeting in this city, to open an investigation and discussion of the whole subject, and to invite the leading American scientists and specialists to contribute papers, and unite in the discussion of this subject, and the most advanced and modern treatment of tuberculosis. The following questions have been decided upon to be submitted for this discussion: 1st. Special hospitals and sanitariums, their construction and operation. 2d. What are the most successful methods of treatment? 3d. Individualization of certain forms of tuberculosis, its importance and necessity. 4th. Is change of climate a necessity for successful treatment? 5th. Should the use of anti toxines in tuberculosis be condemned from a purely scientific point of view? It is purposed to announce, in the programme, the name of one or more experts, who will submit a paper upon each of these questions. As a large number of the specialists are willing to take part at the opening meeting, after the dinner at the opening session at 7 p. m., on the third Wednesday, it is proposed to continue the Congress the next day, so as to make the discussion full and complete. It is proposed not to limit the titles of papers to those stated questions, in case an author desires to submit his views upon any other germane subject that he prefers. The great interest in this subject, on both sides of the Atlantic, which also has been given great prominence in the Paris Congress of 1900, will make the movement of great interest, not only for the profession, but also the general public. Members and others who are willing to take part are requested to immediately write to either member of the committee, upon which of these questions they will submit their views prior to the first of February next, if possible, so that the same may be printed and submitted to the others who are to take part, in advance of the meeting, as is the custom in foreign countries. The following committee has been named by the Medico-Legal Society, to act as a Coumittee of Arrangements for this Congress, with full power, and the profession is desired to co-operate by contributing papers and to taking part in the discussion, and to advise either member of the committee as early as possible. Thomas Bassett Keyes, M. D., 98 State St., Chicago, Ill.; J. Mount Bleyer, M. D., 460 Madison Ave., N. Y.; Clark Bell, Esq., 39 Broadway, N. Y.

Malassimilation.—

℞ Syr. hypophosphite (McArthur's)..... 1 bottle

Sig.—Dessertspoonful at meals and bedtime.

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TO THE MEMBERS OF THE MEDICAL PROFESSION IN THE UNITED STATES.

The cause of humanity and of scientific progress is seriously menaced. Senator Gallinger has again introduced into Congress the bill for the "Further Prevention of Cruelty of Animals in the District of Columbia," which he has so strenuously and misguidedly advocated in the last two Congresses. It is Senate Bill No. 34. Twice the Committee on the District of Columbia has, also unfortunately and misguidedly, reported the bill with a favorable consideration. It is speciously drawn to seem as if it were intended only in the interest of prevention of cruelty to animals, but the real object is twofold: 1, to prohibit vivisection and, 2, to aid the passage of similar bills in all the state legislatures.

It hardly needs to be pointed out that this would seriously interfere with or even absolutely stop the experimental work of the Bureau of Animal Industry and the three medical departments of the government, the Army, the Navy and the Marine-Hospital service. The animals themselves might well cry out to be saved from their friends. No more humane work can be done than to discover the means of the prevention of diseases which have ravaged our flocks and herds. All those who raise or own animals, such as horses, cattle, sheep, pigs, chickens, etc., are vitally interested in the preservation of their health and the prevention of disease.

The inestimable value of these scientific researches as to the prevention and care of disease among human beings it is superfluous to point out. Modern surgery and the antitoxin treatment of diphtheria alone would justify all the vivisection ever done.

As my attention has been called officially to the introduction of the bill, I take the opportunity of appealing to the entire profession of the country to exert itself to the utmost to defeat this most cruel and inhuman effort to promote human and animal misery and death and to restrict scientific research. It is of the utmost importance that every physician who shall read this appeal shall immediately communicate especially with the senators from his state, shall also invoke the aid of the representatives from his or other districts in his state, and by vigorous personal efforts shall aid in defeating the bill.

It is especially requested also that all of the national, state and county societies, at their next meeting, take action looking toward the same end. If regular meetings are not soon to be held, special meetings should be called. Correspondence is invited from all those who can give any aid.

The Committee on the District of Columbia consists of Senator James McMillan, Michigan, chairman, and Senators J. H. Gallinger, New Hampshire; H. C. Hansborough, North Dakota; R. Redfield Proctor, Vermont; J. C. Pritchard, North Carolina; Lucien Baker, Kansas; C. P. Wetmore, Rhode Island; C. J. Faulkner, West Virginia; Thomas S. Martin, Virginia; Wm. M. Stewart, Nevada; and Richard Kenney, Delaware. Personal letters may be addressed to them or to other senators. Petitions should be addressed to the Senate of the United States.

W. W. KEEN, M. D., President American Medical Association.

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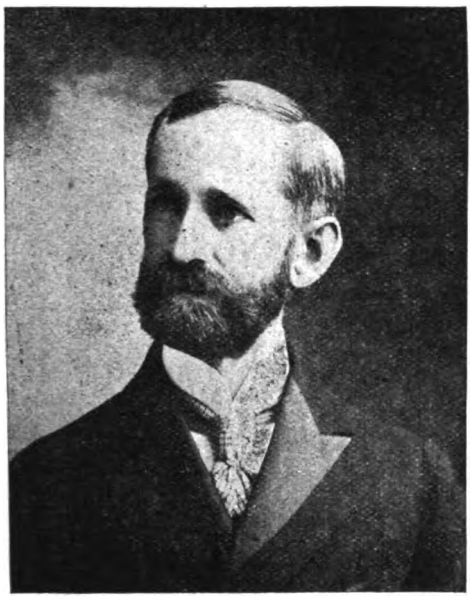

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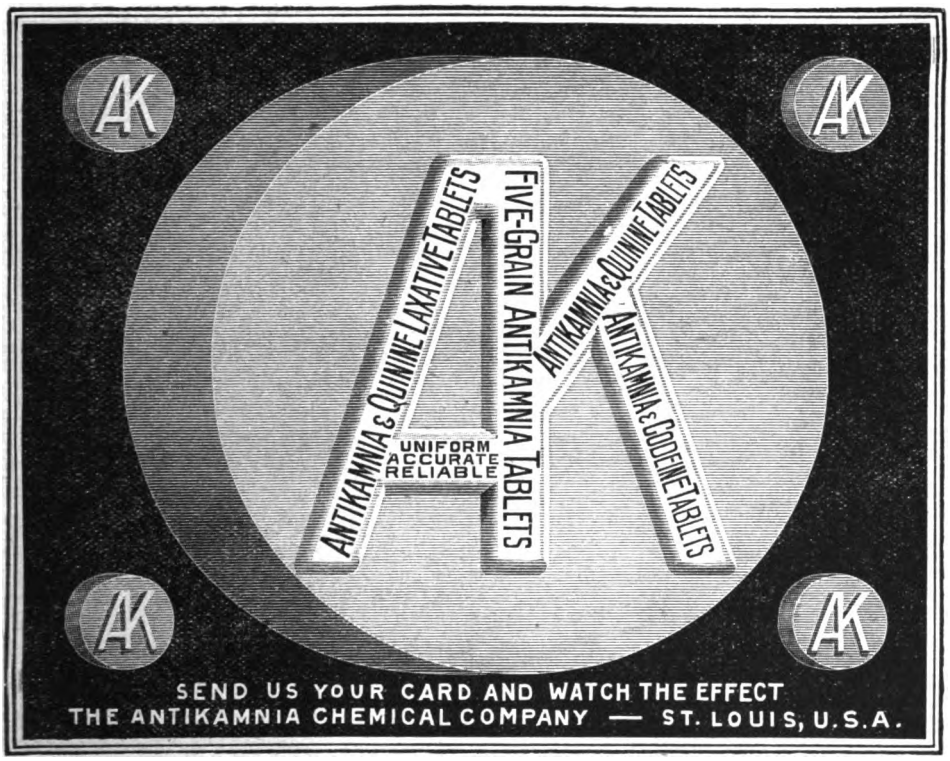

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CONGESTED MAMARY GLANDS.

"Recently I had a very aggravated case of congested mamary gland, ie., caked breast. The lady suffered excruciatingly, the breast being nearly double its natural size. And although my usual remedy in such cases, viz., camphorated castor oil, was fairly effective, yet I concluded to give Unguentine a trial, and am glad I did, for I obtained most gratifying results in less than one-half the time than with my former remedy, which I had used for many years, but is now discarded in favor of your Unguentine. I consider it a duty to state this fact for the benefit of such of the profession as are not too wise to profit by it. You can also recommend it most emphatically for relieving painful bunyons. This is from personal experience.

Yours truly,

DR. WM. B. MANN.

DIET IN TYPHOID FEVER.—(By Fred C. Shurtleff, M. D., Los Angeles, Cal.)—Much has been written both pro and con in reference to this or that article of diet in the management of typhoid fever. It is a settled fact that the food must be fluid, highly nutritious and easy of digestion, for the maintenance of nutrition is imperative in this wasting disease. Milk is probably the most extensively used and will form the main article of diet so long as fever lasts. I have used milk in nearly all its various forms in the care of my cases from frozen or boiled sweet milk to butter milk, from sweet milk, milk with lime water to that partially digested with pepsin or pancreatin when digestion was enfeebled. The tendency in milk diet is to overfeed by forcing too large quantities at one feeding and thereby cause a disgust for that diet upon which we have pinned our faith. If one insists upon an absolute milk diet, not infrequently will you find your patient has gone without it rather than take it. They fret under its administration, digestion is interfered with, curds ing with bacteria of decomposition are found in the increased diar-diarrhoeal discharges, plus the bacteria of typhoid fever already existhence the object which we wish to attain so far as it is possible (that of rendering the gastro intestinal tract aseptic) is defeated from the outset by error in diet. I have often been puzzled as to what to substitute for milk in this class of cases until the stomach became more tolerant. I have tried various farinaceous substances and discarded them on account of the increase of flatulency they almost invariably produced.

For some time past I have tided my patients over their critical period by tablespoonful doses of liquid peptonoids every two hours, giving nothing else in the way of nourishment but the above remedy. I cannot speak too highly of this elegant preparation where digestion is below par, as a highly nutritious food that will not curdle upon the stomach or leave a residue in the intestinal tract. It is a slightly stimulating food, consequently your cases as a rule will require less alcoholic stimulants, a great desideratum in some cases. I do frequently carry through my cases of typhoid successfully, where no other article of diet is given from the time I make the diagnosis until convalescence is firmly established and I call the attention of the profession to it for that class of cases in which milk cannot be taken.—Southern California Practitioner. f.

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The Medical Fortnightly.

Issued Tenth and Twenty-fifth of Every Month by the Fortnightly Press Co.

UNDER THE EDITORIAL DIRECTION OF

FRANK PARSONS NORBURY, M. D. AND THOS. A. HOPKINS, M. D.

Secretary: CHARLES WOOD FASSETT.

A COSMOPOLITAN BIWEEKLY FOR THE GENERAL PRACTITIONER

Editorial Offices in St. Louis, Chicago, Cincinnati, Jacksonville, St. Joseph, Kansas City, and Pueblo, where specimen copies may be obtained and subscriptions will be taken.

Address all business communications to the Fortnightly Press Company.

Address all contributions and books for review to the Editors, Century Building, Saint Louis.

Volume XVII FEBRUARY TWENTY-SIXTH Number 4

Editorial Department.

Dr. William Osler to Medical Students.

WE well remember the many terse and timely remarks of Dr. Osler, when as a teacher, he addressed the students, at his morning clinics in "Old Blockley," Philadelphia. The following from an address given in Columbus, O. (*Columbus Med. Jour.*), is typical of the man, whom American medicine delighteth to honor, because he is an honor to it. Yes, we feel he is at the head of Internal Medicine in America.

"The medical profession is one in which every man can make a success, that is to say, he can be successful if he will work hard, study hard, and take an interest in his patients, not that they are patients, but because of his duty to mankind, will succeed. Practice not only with your head, but with your heart also. Avoid professional jealousies and bitterness. Doctors are worse than parsons in engendering ill-feeling among themselves. When you locate, look up all respectable doctors, and leave your card. Tell them that you are going to locate, and that you are going to deal squarely, and you will find they will treat you right. Shut up at once the patient who would tell you of the faults of a professional brother. They will go to another and say the same of you. If you go with the seamy side out, the same side will be turned toward you. Go with the woolly side out, and all will be well, and success crown your efforts." F. P. N.

MEETING POSTPONED.—Marshall, Mo., February 15th, 1900.—On account of continued bad weather and bad roads, with an unusual amount of sickness, the regular meeting of the Missouri Valley District Medical Society, which was to have been held on the 20th inst., has been postponed. We have a most excellent program arranged, and it would be very unwise to proceed, with almost certain failure confronting us. The date will be fixed as soon as the way seems clear, and due notice will be given.

J. E. HARRIS, M. D., Secretary.

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He Cannot Sleep at Night.

IT WILL be remembered that Dr. William Smith of the All-American School of Osteopathy—the genuine school (with its name blown in the glass), some two years ago got mixed up with the Cook County, Illinois, Board of Supervisors over the simple thing of body snatching. Yes! he the Lochinvar of Osteopathy; the pride of an old man's senility, and the pompous promoter of the new science of ostepathy, came out of the West to get mixed up with burglars, and managed to get a Cook county indictment. A reward of $250 still flutters before the breeze for the sleuths to scent and cause them to scheme to get it. We have felt that Dr. William has been off of his feed, and had but little peace of mind for some time, at least ever since we read his paper on "The Superior Cervical Ganglion," which appeared in that Beacon of Osteopathic Truth, the *Journal of Osteopathy*, in September. It shows he had insomnia, or some other mental disturbing agent. His knowledge of neuro-pathology had evidently slipped its trolley. He seemed to have string-halt, and probably a wart on his intellect, but the following from the Chicago *Record* explains all. We now know why his Edinburgh degree does not float correctly, and is simply a parachute to enable Dr. William to reach terra firma again when soaring too high with inflated osteopathic wind. But hear what ails Willie, and then drop a tear:

> "Dr. William Smith, of Kirksville, Mo., under indictment in Cook county for the alleged theft of four bodies from the Dunning morgue in October, 1897, wants peace of mind and freedom of movement which he says are not his while it dangles over him. He has written to Daniel D. Healy, who was president of the county board when, it is alleged, the theft was committed, to induce State's Attorney Deneen to quash the indictment. Dr. Smith has never stood trial on the burglary charge, owing to the refusal of the Missouri authorities to honor requisition papers, but he declares he has done full penance meantime in sleepless nights, in inability to cross the borders of his state for fear of arrest and in dodging a half dozen attempts to kidnap him for the reward of $250 offered for his capture.
>
> "HISTORY OF THE CRIME.
>
> "The quartet of bodies looted from the Dunning morgue on the night of October 24, 1897, were shipped to a medical college in Kirksville, presided over by Dr. Smith. Evidence resulted in the indictment of Smith, Henry Ulrich, a watchman at the institution, and John Ludes, who, it was charged, furnished the team which carried the bodies from Dunning to the Santa Fe depot in Chicago, where they were shipped in trunks as baggage. Ludes was acquitted, but Ulrich served a year in Joliet, enlisting on his release last year in a volunteer regiment for Manilla.

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"Dr. Smith's letter to Mr. Healy, which is now in the state's attorney's office, reads in part:

"'At the time I purchased the four bodies, Ulrich solemnly assured me he had the consent of the authorities to such traffic, and I believed him. I am now desirous of making the amends which are due. It has cost me an infinite amount of annoyance, many a sleepless night, and has nearly cost a couple of lives in attempts to kidnap me. It has tied me up in the State of Missouri during the months of July and August of this year, and so compelled me to cancel lecturing engagements to the value of $1,800. It prevented me from visiting Europe last year and seeing my son, whom I have not seen for eight years. All this for doing what I considered my duty, at the request of the school and as their agent, to secure material for demonstrations in anatomy.

"HAD TO TAKE FOUR AT FIRST.

"'At the time we went to Chicago, we went upon notification that we could have the bodies, and that at least four must be taken for the first order, the price to be paid for the same being arranged before leaving Kirksville. A gentleman visited Chicago last summer to see if any adjustment of the matter could be made, stating that I would consent to plead guilty to the charge of trafficking and pay a fine as adjudged, but he reported that you objected to such procedure on any basis other than a personal appearance in court and taking chances on being imprisoned. It is impossible for me to go to prison. I would not care a straw for it personally to get freedom of action in the future, but my school work must be attended to.'"

Dulce et decorum est pro patria mori. F. P. N.

AN EVENING WITH THE MICROSCOPE.—On the evening of February 5th the Academy of Science entertained its friends at its rooms, Sixteenth and Locust streets. The evening's entertaiment was given under the direction of Dr. H. M. Whelpley, and consisted of the following microscopic exhibits: Anatomy by Dr. R. J. Terry; bacteriology, by Dr. Amand Ravold; blood examination, by Dr. Ludwig Bremer; botany, by H. F. Roberts; diseases of forest trees, by Dr. Herman von Schrenk; drug adulterations, by O. H. Elbrecht; flour inspection, by Victor Goetz; insects parasitic on man, by C. F. Baker; living protoplasm, Dr. Otto A. Wall, Jr.; microphotography, by Robert Benecke; mineralogy, by Dr. G. Hambach; photographic dry-plate testing, by Robert Benecke; microphotography, by Dr. Adolph Alt; physiology, Dr. Hartwell N. Lyon; seed adulterations, by F. W. Maas; spice adulterations, by William K. Ilhardt; textile fibres, Peter J. Weber, Jr.; trichina, by Dr. G. C. Crandall. The evening was vastly profitable and enjoyable.

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The Reviewer's Table.

Books, Reprints, and Instruments for this department, should be sent to the Editors, St. Louis

GOOD books live. They have a perennial reputation, which adds glory and value to their intrinsic worth. Bartholow, as an author, has built his reputation upon good, substantial, discriminating work. Hence the ten editions of his "Materia Medica" have found ready sale, and still the demand continues. This edition is carefully revised, but perhaps does not fully treat of some of the newer features of therapeutic progress. It is not wholly clear upon animal extracts, antitoxin and some of the newer remedies are not mentioned. However, taken upon its true merits, it is a true model which some of the later writers would do well to follow. Bartholow as a teacher was essentially practical, as an author he is clear; he is thorough, and what he says is to be relied upon. For these reasons his books will be popular so long as their revision is in accord with the same thoroughness and careful preparation. New books come, and new books go, but the classics remain as sign-posts for the wayfarer in medicine to guide aright his footsteps. Bartholow is a sign-post.

A PRACTICAL TREATISE ON MATERIA MEDICA AND THERAPEUTICS. By ROBERTS BARTHOLOW, M. A., M. D., LL. D., Professor Emeritus of Materia Medica, General Therapeutics and Hygiene in the Jefferson Medical College of Philadelphia, etc. Tenth edition, revised and enlarged. New York: D. APPLETON & CO. 1899.

F. P. N.

THE third edition of this now established standard text-book, is uniquely original, elaborate where necessary, but concise upon the whole. New matter has been added to keep in touch with the advance of surgical knowledge. New illustrations appear too, which taken with the already extensive illustrations, profusely elaborate the text. Inasmuch as the authors are all teachers, it is safe to say it is the most satisfactory text-book now published.

AN AMERICAN TEXT-BOOK OF SURGERY. FOR PRACTITIONERS AND STUDENTS. By PHINEAS S. CONNOR, M. D., FREDERICK S. DENNIS, M. D., WILLIAM W. KEEN, M. D., CHARLES B. NANCREDE, M. D., ROSWELL PARK, M. D., LEWIS S. PILCHER, M. D., NICHOLAS SENN, M. D., FRANCIS J. SHEPARD, M. D., LEWIS A. STIMSON, M. D., J. COLLINS WARREN, M. D., and J. WILLIAM WHITE, M. D. Edited by William W. Keen, M. D., LL. D., and J. William White, M. D. Third edition. Thoroughly revised. Philadelphia, W. B. SAUNDERS, 1899. Price, Cloth, $7.00; Sheep or half Morocco, $8.00.

B.

DR. ELSWORTH S. SMITH and Miss Grace Platt were married at the home of the bride, 3659 West Pine Boulevard, on February 21st. Best wishes of the FORTNIGHTLY staff.

MARRIED.—Dr. S. L. Burton, of Kaseyville, Mo., was united in marriage to Miss Nannie T. Kasey, daughter of Dr. J. T. Kasey, Salisbury, Mo., on February 15th. The FORTNIGHTLY extends congratulations.

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Original Department.

PAPERS for the Original department should be in hand one month in advance, and contributed to THE MEDICAL FORTNIGHTLY exclusively. A liberal number of extra copies will be furnished authors, and reprints may be obtained at reasonable rates, if request accompanies the manuscript. Engravings from photographs furnished free.

Contributions, and books for review, should be sent to the Editors, 312 Century Building, St. Louis.

☞ Signature of contributor, for reproduction, should be sent with every article, on a separate slip; use heavy ink, and allow autograph to dry without applying blotter.

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Carcinoma of the Esophagus.

BY AUGUSTUS A. ESHNER, M. D.,

PHILADELPHIA,

Professor of Clinical Medicine in the Philadelphia Polyclinic; Physician to the Philadelphia Hospital, etc.

Presented to the Pathological Society of Philadelphia, December 14, 1899.

A. W., a white man, sixty years old, was admitted to the Philadelphia Hospital on August 16, 1899, and died on September 17, 1899. On admission he complained of cough and expectoration, with inability to retain food. The family history presented nothing noteworthy. The patient had had pneumonia nine years, and pleurisy two years, previously. He denied venereal infection, but he admitted the moderate use of alcohol and tobacco. He had suffered from cough for a year, which was growing progressively worse, and was attended with rather profuse expectoration, especially in the morning. For a year there had also been vomiting after ingestion of food, with a sense of burning referred to the epigastrium. The vomited matter consisted of the food last ingested, but it never contained blood. There had been considerable loss of weight, and there was also shortness of breath. The patient presented the aspect of an old and somewhat emaciated man. The tongue was covered with a heavy white fur. The pulse was of good tension, and the arteries were hardened. The chest was spare, with its antero-posterior diameter much increased. The costal angle was about a right angle. The respiratory movement consisted principally in an upward and downward movement of the entire chest. The

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pulmonary percussion-resonance was impaired over the upper lobes of both lungs, but elsewhere the note was hyper-resonant. The breath-sounds were harsh, and expiration was prolonged and sonorous. Vocal fremitus was increased. The apex-beat of the heart was neither visible nor palpable. The heart-sounds, however, exhibited no abnormity. Examination of the sputum on two occasions failed to disclose the presence of tubercle-bacilli. The urine contained hyaline tube-casts, but albumin could not be found. Vomiting persisted at frequent intervals, even with a semi-liquid diet, and also a milk-diet, and usually after meals. The vomited matter was always small in amount, and never contained blood. Introduction of the stomach-tube after a test-meal, on August 28, was attended with great difficulty, a paroxysm of coughing setting in when the tube had passed a certain distance, and the latter was expelled. It was thought that the stomach was entered, and examination of the fluid obtained disclosed an absence of free hydrochloric acid, of lactic acid, and of butyric acid, and also of sarcina ventriculi. On a subseqent attempt to pass the tube a few days later, obstruction was encountered in the neighborhood of the cardia, about fourteen inches from the edge of the teeth, the tube curling up upon itself, and being expelled by cough. On examination of the blood the red cells were found to number 3,225,000, the white cells 18,400 (polymorphonuclear 70 per cent, large lymphocytes 22 per cent, small lymphocytes 8 per cent; eosinophile cells were not found). The patient stated that he could not swallow solid food, which seemed to pass to a point referred to the lower extremity of the sternum, and corresponding with the cardiac orifice of the stomach. He complained of no pain or soreness. At times in swallowing milk regurgitation of small amounts would take place in a short time. On September 15 it is noted that the patient had not vomited for about a week, his diet being restricted to peptonized milk and milk-punch. The appetite had failed, and the man was gradually growing weaker. An esophageal bougie, with a bulb one-half inch in diameter, encountered obstruction at a distance of eleven and a half inches beyond the margin of the teeth. The smallest bulb available, one-fourth inch in diameter, passed into the stomach with difficulty at a distance of sixteen inches. The stricture that was thought to be present was estimated as being three-fourths inch in length. Neither tubercle-bacilli nor carcinoma-cells could be found in the stomach contents, but numerous diplococci were present. On September 17, the respirations had increased to 56, and the pulse to 128. A slight chill had occurred the day before, and a severe chill was repeated. The difficulty in swallowing persisted, asthenia grew gradually more pronounced, and death resulted. On post-mortem examination there were found chronic fibrous pleurisy, fibroid myocarditis, atheroma of the coronary arteries, tuberculosis of both lungs, a moderate degree of parenchymatous and interstitial nephritis, chronic gastritis, and stenosis of the esophagus, with ulceration. The esophagus was normal for three inches above the cardia, but at this level a neoplasm was present, with thickening, induration and ulceration. The ulcer exhibited cheesy areas suggestive of tuberculosis, although the possibility of epithelioma also was considered. The lymphatic glands in the vicinity were enlarged, some apparently tuberculous, while others were free from tuberculous nodules and caseous areas.

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Dr. Thomas S. Kirkbride, Jr., who kindly undertook a histologic study of some of the tissue, reports the esophageal growth to be an epithelioma, adding that the tumor is a typical example of its class. He states further that a section of the lungs exhibits pneumonic changes, the air-vesicles containing fibrin, many desquamated epithelial cells, and a comparatively small number of leucocytes and red blood corpuscles. On staining by Gram's method diplococci with all the morphological characteristics of the pneumococcus were found to be quite numerous in the exudate. The portion of lung examined presented none of the usual and more typical evidences of a tuberculous process.

This specimen is a typical one, both in situation and in histologic structure. For a time, both during life and after death, the probability of tuberculosis was considered, largely by reason of the lesions in the lungs, but the histologic study proves the condition to be the more common one of carcinoma. I am indebted to Dr. G. E. Pfahler, resident physician, for faithful observation and careful notes of the case.

224 South Sixteenth street.

A Case of Aortitis.

BY DR. RENDU,

PARIS.

Professor (Agrege) Paris Faculty of Medicine, Physician to Necker Hospital, Paris.

A Clinical lecture delivered at the Necker Hospital, Paris.

Translated by Doctor Linn, 19 Rue Caumartin, Paris.

GENTLEMEN: I wish to speak to you to day of a patient who is attacked with a species of vertigo that is not common and needs some explanation. This man is a clerk and is forty-eight years of age, he is a very intelligent fellow; his medical history is of no importance, both he and his family having always been in fair health. During the last three years, however, he has complained of attacks of vertigo; at first they came at long intervals and he did not bother about them, but of late he has found them oc ming on several times a week and he came to us. If we question him he will tell us that he noticed that the attacks always came on in the morning after he had walked a little, he then feels painful sensation of vertigo, his head turns and he cannot direct himself, indeed he has fallen down several times. At these times he also has certain other symptoms such as, a very peculiar sensation of all objects he looks at dancing up and down before his eyes while at the same time everything appears red; he hears also a strange rhythmical sound which evidently can be referred to the pulsation of the heart.

With all this he keeps his intelligence and knows exactly what is the matter, he does not faint, nor lose his memory of events in any way. During the crisis he has a weak feeling only. Although his intellect is not

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interfered with, he can not speak during the attack, but we cannot tell whether this is owing to emotion or to some passing cerebral inhibition.

The duration of these attacks is only a few seconds. At the same moment he is seized with anguish of the precordia, and has a sensation as if a weight were upon his chest; sometimes the sensation is like a vise pressing upon his heart. He seems to have a distinct realization of irregular heart contraction. He localizes his troubles in the anterior portion of the thorax and in the retro-sternal region.

Besides these symptoms he also has some peripheral circulatory troubles: feeling a pain in the right arm and a sensation of deadness in the fore arm and fingers; indeed his hand is so overcome this feeling that he cannot hold anything in it at the time Sometimes he feels palpitation or disordered movement of the heart as he regains consciousness, and sometimes has palpitation before the attack. So that vertigo opens the scene, then eye and ear troubles follow and finally the circulation symptoms. All these symptoms succeed one another in a few minutes and the patient gradually regains his normal state.

As the pain passes, sensibility returns, and the vertigo, with the dead feeling of the hand, is no longer felt. Then he breaks into a cold sweat and has an abundant passage of clear urine.

I should have said that he is sometimes taken with nausea, as a rule, without vomiting, but if the attack comes on soon after eating he will vomit. After the crisis his head is heavy for some hours and he feels very much fatigued just as patients do after attacks of angina pectoris or epileptic fits. We do not know how his pulse acts during the attacks, but it has a very feeble tension now, his general health is good, except, as he says, he has some oppression from time to time.

The sensations of the right arm prove that the circulation is irregular and we find the fingers are constantly cold and the nails white, but there is no actual tactile anesthesia.

We said that these symptoms began three years back, but on questioning him carefully we note that he had some slight signs of the trouble before this time, and it was actually in 1889 that he first had vertigo. You will understand from these symptoms that the question of diagnosis is rather a delicate one. In the first place we may ask ourselves if this is not a simple case of vertigo? And at first thought with his actual vertigo, eye and ear troubles, nausea and failure to stand erect, we might say there is proof of a vertigo, but as this is complicated by palpitations, precordia anguish, irradiation to the arm, etc., makes one think of something else; is it angina pectoris? The suddeness of the attacks, the sensation of the constriction in the chest, the point, that the pain seems to start from the heart and runs over the precordia, with its irradiations down the arm, seems to indicate a real angina pectoris. But you will have noticed that the pain goes down the *right* arm and side; in angina pectoris the right side it is true may be involved, but then the left is also! In angina pectoris when the pain is felt on the right side there is always bilateral irradiation. Besides our present patient does not have the sharp pain of angina, but a dull painful feeling of a dead limb.

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Also in real angina pectoris there are no cerebral symptoms, no vertigo, nor eye and ear symptoms similar to those of our patient. The real anginal patients have also usually some pulmonary symptoms with congestion and even haemoptysis. In fact we have here a syndroma that is intermediate between vertigo and angina pectoris.

Let us run over the different affections in which vertigo is a symptom: Is it a epileptic vertigo? No, because then there would be a loss of consciousness and intelligence, our patient knows exactly what is going on when he has an attack, besides there is no proof of a hereditary or personal history of this disease; from similar considerations we can say that it is not a gastric vertigo; you know that we have two varieties of gastric vertigo; one being produced during digestion and the other while the stomach is empty. In our case the vertigo does not seem to have any relation to digestion at all, it comes on at irregular intervals without regard to food, and besides the gastric vertigo patients are dyspeptics, and ours is not, he does not complain of his stomach nor is he constipated.

Ear trouble will attract your attention. In Meniere's disease there is an auditive vertigo, but in both cases the persistent quality of the symptoms will throw these diseases out.

We may then, by exclusion, now think of the troubles that depend upon the cerebral circulation, such as anemia and congestion; one could think of congestion if the patient's face was violet and he looked plethoric. We conclude therefore that this patient is suffering more likely from anemia for the following reasons: The crisis comes on generally when he gets up, from the horizontal to the vertical position, when in fact the brain is no longer in a state of congestion; we also find the pulse small and the pupils dilated, but these objective signs would not be sufficient, therefore we must examine the organs of circulation,

The heart is not actually hypertrophied and there are no lesions, although the sounds are dull. An examanation of the aorta, brings us more important evidence. About the level of the second and third intercostal spaces on the right side we find a systolic murmur, due to the dilatation of the vessel. This murmur is rough and grating and is prolonged all along through the aorta; the dilatation is not very great, for we do not see that the beating of the sub-clavian artery is higher than in the normal state. If you examine the radial arteries, the right one has hardly any pulse, just a slight undulation is felt, it is therefore much diminished.

This last fact proves to us that the circulation is wrong on the right side and there must be a narrowing of the brachio-cephalic trunk. This stricture may have several origins: It may be due to an aneurism, but then there would be some difficulty in swallowing and a cough, or at least a hoarse voice, besides there would be some difficulty in the venous circulation as well. But our patient does not present these signs.

We must then think of a plaque of atheroma at the origin of the brachio-cephalic trunk whose calibre must be diminished. According to the late Professor Peter, it is just here where the current is the most rapid, that these atheromatous plaques are most frequently formed.

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We have already said that the medical history of our patient did not give us any clue, he has had no lead poisoning, is not addicted to tobacco or alcohol, nor has he syphilis, so we have none of the usual causes of atheroma. But in his recent history he tells us he had articular rheumatism, this was some three years ago. Rheumatism, you know has an action on the endoarterial coats as well as upon the endocardium; quite lately the patient had the grippe, which brought back his rheumatism. To be quite complete in his history, we must mention that he had the phenomenon of "dead finger" some seven years before these attacks of vertigo, so it is possible that he was predisposed to arterial attacks and vascular troubles.

These different facts are enough to admit the diagnosis and to explain the atheroma without forcing us to give as a reason for the symptoms some narrowing or anomaly of the arterial trunk.

The prognosis is grave, because these plaques of atheroma have a tendency to spread out and then to retract by degeneration, and this in fact is the explanation of the recurring attacks, besides this there is a tendency for it to attack the coronary arteries, when we could have a fatal issue.

Nevertheless the lesion is not incurable, and in casting the prognosis we must take into account that the attacks are probably produced by a process that acts by slow degrees- and from these considerations we can give the indications for treatment. First of all we must suppress the sudden changes of pressure that are produced in the cerebral circulation, and opium given in a small dose for a long time gives as good results here as it does in aortic insufficiency.

Trinitrine, by acting on the vaso-dilatators causes an artificial congestion and favors the afflux or blood, we will give it by ordering him to take, morning and evening, three drops of a one per cent alcoholic solution in a wineglassful of water. Finally potassium iodide will be given in 0.50 centigram doses per day, as it has an action on the atheromatous processes. To this we will add a few fly blisters, and perhaps some cautery points.

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Eclectic Medical Books.—There is a great amount of information in Eclectic literature which is of interest to the general practitioner, in fact it would almost seem that there is no particular reason why eclecticism should be divorced from the regular fold; fortunately this is a question which we do not have to settle. But it is a fact that the most successful physician feeds in various pastures, and while browsing around picks up valuable facts wherever he finds them. The use of this material is largely the secret of his success. A knowledge of the fundamental principles of the more important sects with which one comes in competition is wholesome to say the least, it is fatal to bigotry. The fact that the medical library of today has room on its shelves for a wide range of literature, that a worn volume is not always what would, a few years since, have been termed "regular," is one of the hopeful signs of the times.

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PHYSIOLOGY.

BY A. L. BENEDICT, A. M., M. D.,
BUFFALO.

CHAPTER XXXIII.—BRAIN—MEDULLA.

The brain or encephalon is developed as the anterior outgrowth of the primitive nervous system, the central canal of the spinal cord being represented by the ventricles and the Aqueduct of Sylvius. According to the primary vesicles thus formed, the brain is divided as follows:

1. Hind-brain, about the fourth ventricle—Medulla, Pons, Cerebellum.

2. Mid-brain, about the aqueduct of Sylvius—Corpora Quadrigemina and Crura Cerebri.

3. Fore-brain: (A) About the third ventricle—Optic Thalami, Pineal Gland, Nervous Portion of Pituitary Body, Infundibulum and, as a prolongation, the Optic nerves and Retinæ.

(B) About each lateral ventricle (representing a lateral outgrowth from the anterior primary vesicle—Cerebral hemisphere, Corpus Callosum, Corpus Striatum, and, as an anterior prolongation, the Olfactory Bulb which constitutes, in the lower animals, a distinct cerebral lobe.

The Medulla Oblongata or Bulb, is the upper expansion of the spinal cord, spread out by the broadening of the central canal of the cord into the fourth ventricle, which is open posteriorly. Beside the tracts of the cord, certain centers are added. Its functions are:

1. Conduction, already sufficiently considered under the spinal cord, the tracts being continuous, though anatomically distorted.

2. Origination of Nerves. The fifth to the twelfth cranial nerves originate from the bulb, somewhat as the spinal nerves from the cord, except that the distinction of roots cannot be made, though the fifth closely resembles the biradical beginning of the spinal nerves. The conscious centers of these cranial nerves do not reside in the medulla any more than those of the spinal nerves reside in the cord. In both cases, the nerve center is located in the opposite side of the cerebrum.

For the sake of convenience, the origins of the other cranial nerves are inserted here. The first originates in the olfactory bulb, a rudimentary cerebral lobe. The second in the posterior part of the optic thalamus, corpus geniculatum and superior corpus quadrigeminum. The third and fourth, from the grey nuclei about the aqueduct of Sylvius. The origin of the fifth is partially from a mass of grey matter in the pons. The cerebral centers of the various cranial nerves, so far as they are known, will be discussed later.

3. Vital Control. In general, all spinal centers are subsidiary to controlling centers in the medulla while the physiologic processes upon which life immediately depends, are quite directly under control of the medulla. Thus, puncture of the medulla—except by a very fine-pointed instrument—

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causes immediate death by stoppage of respiration and pulse, death being usually primarily respiratory on account of the independent action of the intrinsic cardiac ganglia. Death by hanging is often not due to asphyxia, but to destruction of the medulla by the dislocated odontoid process of the axis. The group of vital centers in the medulla is termed noued vital or vital node. The following vital centers have been demonstrated in the medulla, partly by stimulation by electricity of slight mechanical injury, partly by minute destruction of tissue, partly by the negative evidence afforded by frogs, whose brains are destroyed down to the medulla, partly by observation of anencephalus monsters, human and animal, partly by observation of marsupial embryos before the anterior portions of the brain have been developed, partly by observation of symptoms following local disease in the human being.

A. Centers connected with Nutrition.

1. Mastication. Also a voluntary process and, apparently, more under reflex control of the medulla in lower than in higher animals.

2. Deglutition. The first stage is voluntary.

3. Sucking. A necessary reflex process for the infant and observed in anencephalus monsters.

4. Vomiting. Usually a reflex from the stomach, but sometimes due to direct irritation of the medullary centers by poisons circulating in the blood. Necessary to afford protection from poisons and fermenting and excessive food.

5. Secretion of saliva.

6. So-called diabetic center, injury of which causes sugar to appear in the urine. Apparently the glycosuria is due to interference with the glycogenic function of the liver, not to failure of the internal ferment of the pancreas. By some it is believed that this center merely controls the blood supply of the liver.

7. By analogy, it may be assumed that other secretions of viscera, the movements of the hollow organs, etc., are controlled by the spinal cord subject to the general control of the medulla.

B. Centers connected with Respiration.

1. Inspiratory subcenter which rhythmically calls forth action of the diaphragm and other muscles.

2. Expiratory subcenter, which is usually merely inhibitory to the former, though expiration may be due to active contraction of expiratory muscles.

3. Coughing subcenter, located above the inspiratory, and usually called into action by stimuli from the superior laryngeal branch of the pneumogastric.

4. Sneezing subcenter and, probaly, other subcenters for the other modifications of the respiratory acts, already discussed under the pneumogastric reflexes.

C. Centers connected with Circulation.

1. Cardio-inhibitory, acting through the pneumogastrics and usually constantly—tonically—in action.

2. Cardio-accelerator, acting through sympathetic fibres.

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3. Vaso-constricting, tonically in action. Pallor from mental emotions, etc., is produced reflexly through this center.

4. Vaso dilating, acts usually as inhibitory of the former, as the expiratory does of the inspiratory. The diabetic center is considered by some, to be a localized hepatic vaso-dilating center.

Blushing from mental emotions and flushing of the skin generally, as well as turgescence of glands, etc., before activity, is under control of this center. Shock, due to severe injuries, operations, etc., has a marked influence in dilatating the arterioles, but probably by depression of the vaso-constricting center, rather than stimulation of the vaso-dilating center.

5. Perspiratory. This acts largely by dilatation of the vessels of the skin, but also by stimulation of the sweat glands, as, otherwise, mere flushing would ensue.

D. Miscellaneous centers.

1. Dilatation of the pupil is produced by stimulation of the bulb, the impulse passing partly by the third nerves, but mainly by the spinal cord, and by the lower cervical and upper dorsal nerve-roots, into sympathetic fibres. This function is similar to vaso-dilatation, the same kind of muscular tissue being involved.

2. Spasm centers. High degrees of toxicity of the blood, either from poisons formed within the body or introduced from without, produce general spasm of voluntary muscles, just as milder degrees cause spasm of unstriped muscle.

3. Heat regulating centers, for increasing or diminishing the production of heat by oxidation or the dissipation of heat by evaporation, etc., are also probably located in the bulb.

All of the above centers are probably bilateral, though experiments on circulation, respiration, bodily temperature, glycogenic function, etc., can not well be carried on so as to affect one side of the body. An attempt has been made to classify these centers into reflex, automatic, control and tonic. As already explained, all automatic actions seem to be made up of a series of reflexes, so that a nice distinction between reflex and automatic is impossible. Certain phenomena, as those connected with the genital organs, rectum and bladder, seem to be quite completely controlled by the spinal cord, while those connected with respiration, cardiac action, etc., are mainly controlled by the medulla, but it does not appear that there is such a difference of kind as to justify a separate classification of controlling medullary centers, but merely a difference of degree. The cardiac center of the medulla acts through local centers in the heart muscle and the respiratory center through grey cells of the spinal cord at which the neurons of the nerves begin. The nature of tonic impulses has already been referred to, but it does not seem sufficient to warrant a separate classification. Theoretically, life may be preserved so long as the medulla and the nerve channels leading from it to the heart and lungs are intact. The shock of operation prevents the carrying out of this theory into practice, in the higher animals. In amphibia, the brain has been removed from above and the cord from below, with continuance of cardiac action and respiration. It must not be forgotten, however, that most of the viscera are necessary

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to life as the heart and lungs, except that cessation of their function is not so promptly followed by death. The lower the nervous activity of the animal, the greater the relative importance of the medulla and cord, and the less that of the cerebrum and cerebellum. Even in human beings, life has been maintained for days with the cord paralyzed nearly up to the fourth cervical segment, from which the phrenic nerves mainly arise, and with the conscious centers in a state of abeyance, either from local circulatory changes, or from toxic matters in the blood.

CHAPTER XXXIV.—PONS, CRURA CEREBRI, BASAL GANGLIA, CEREBELLUM.

The Pons Varolii is the great viaduct connecting the medulla, cerebellum and cerebrum, and serving as the principal commissure of the cerebellum. Anteriorly, it leads into the crura cerebri. The exact nature of the impulses conveyed by the intercentral fibres of the pons, that is, fibres leading only to and from the cerebrum, cerebellum and medulla, is not known, though it may be inferred from the general function of the medulla and cerebellum. All impulses, afferent and efferent, connected with conscious centers, except those of the first four cranial nerves, and some that travel by a small, independent tract between the cerebellum and cerebrum pass through the pons. The pons is almost solely a conducting organ, and hence composed of white matter. It contains two masses of grey matter, of unknown function, except that one is supposed to be part of the origin of the fifth nerve.

The Crura Cerebri are also mainly conducting organs, of white matter, but they also contain grey matter of unknown function. Except the small tract between the cerebrum and cerebellum, they form the sole communication between the cerebrum and the inferior centers.

In intimate connection with each crus cerebri, are the Corpus Striatum —nearly completely divided into two nuclei, the caudate and the lenticular— and the Optic Thalamus. These resemble, histologically, cerebral cortex. Their function is unknown, except that the latter contains part of the origin of the optic nerve and that lesion of the corpus striatum or anterior part of the optic thalamus causes a rise of temperature.

The Corpora Quadrigemina are connected by numerous fibres with the cerebellum. The anterior pair receive fibres from the cranial nerves connected with sight and the movement of the eyes. Destruction of an anterior corpus causes dilatation of the pupil of the same side and blindness of the corresponding visual field. (Opposite hemiopsia, on account of the crossing of rays of light and optic chiasm.) The posterior are connected with the sense of equilibrium, and their destruction causes inco-ordination and sometimes forced movements. In birds, amphibia and fishes, the corpora quadrigemina are developed into the optic lobes, and perform much of the function of the human cerebellum.

The Corpora Geniculata are intimately associated anatomically and, probably also in function, with the former, the lateral corpus geniculatum with the anterior corpus quadrigeminum, the median corpus geniculatum with the posterior corpus quadrigeminum.

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The Cerebellum consists of a central lobe called the Vermis and two hemispheres, with grey matter located externally to white, as in the cerebral hemispheres. Within the central white matter, are masses of grey—the corpora dentata. The hemispheres communicate with each other through the vermis and the pons. The cerebellum connects with the medulla and cerebrum by special bundles of intercentral fibres, beside the pons.

Irritation of the cerebellar hemispheres causes no sign of pain, but irritation of the vermis or the intercentral fibres to the medulla and cerebrum does cause pain. Destruction or disease of the cerebellum does not interfere with sensation. Irritation of no part of the cerebellum causes motor response. Removal of the superficial layers of the cerebellar cortex produces feebleness and lack of co-ordination of voluntary and reflex movements. Removal of the middle layers produce violent and markedly inco-ordinate movements, when voluntary or reflex stimuli are present. Removal of the cerebellum prevents any kind of co-ordinate movement, though not interfering with sensation nor causing actual paralysis. Unilateral injury or disease of the cerebellum, crus cerebri, medulla, pons, corpora quadrigemina, corpus striatum, optic thalamus and, according to some, of the cerebral hemisphere, causes inco-ordination of the opposite side of the body. In some experiments or lesions, "forced" or "circus" movements are produced, the animal or patient tending to fall toward the side opposite to the lesion and turning round and round, with the head as a center, sometimes with great rapidity and for long periods of time. It is questionable whether these movements are really forced, or whether they consist merely in the futile attempt to regain equilibrium. If the vermis is irritated anteriorly, the animal may turn forward summersets, if posteriorly, backward.

The cerebellum is connected from above, chiefly with centers and origins of sight, equilibrium and movement of the eyes, that is sources of information regarding direction and equilibrium. From below, it may be assumed that the large spinal tracts passing to the cerebellum carry mainly excito-reflex impulses connected with muscular sense and pressure or touch, so that the general function of the cerebellum is to distribute motor impulses so as to obtain properly co-ordinated movements. In confirmation of this view, is the fact that animals of sluggish movement do not possess cerebella.

CHAPTER XXXV.—CEREBRUM.

The cerebrum consists of two large hemispheres, connected by a commissure, the corpus callosum. Minor commissures also exist. The grey matter of the cerebrum is located externally, the white internally. If the cerebrum be removed from a frog, leaving the mid and hind-brain intact, it performs various elaborate movements almost as well as before, but only on reflex stimulation. Even stimuli of sight and sound produce reflex movements. If the cerebral hemispheres of birds and rabbits are removed, a similar condition follows, except that there is no response to light and sound. It is also noted that the relative size of the cerebral hemispheres, as well as the depth and complexity of their convolutions vary directly as

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the intellectual development of the species of animal. Conspicuous deficiency of the cerebral hemispheres, especially of the frontal lobes in man, is the mark of idiocy. From such observations, and noting the effect of cerebral disease, it is inferred that the cerebrum deals with all manifestations of consciousness, but not with the maintenance of life, nor even with the reflex production and co-ordination of movements performed by voluntary muscles.

While the weight of the average human brain is relatively—and excepting the whale and elephant, absolutely—greater than of any other animal, it is not possible to decide from the examination of different human brains to what race they belong nor, barring extreme cases of disease and failure of development, to draw conclusions as to the intellectuality of the owner. The adult male brain weighs about 1550 grams, about one-thirtieth to one-fiftieth of the total weight of the body. The average female brain weighs 10 or 12 per cent less, but is relatively as large as the male, considering the average total weight and the greater relative amount of fat. Some of the most noted scientists have had comparatively small brains, and some of the largest brains recorded have belonged to men of little intellectuality. The perfection of development of the intercentral fibres, the education of the cells and other details, not demonstrable microscopically, may compensate in quality what a brain lacks in quantity.

From experiments with electricity, observation of failure of brain-power or paralyses after the removal of portions of the cerebrum, comparison of the symptoms of brain disease with the lesions found post-mortem, the functions of the cerebral cortex have been quite definitely localized. However, the results of such observations are somewhat contradictory, from the fact that different parts of the cortex seem to have the power of acting vicariously for others. This is especially the case in developing animals, and in lower animals as compared with higher and, even in man, in regard to the higher intellectual functions.

The motor areas lie on both sides of the fissure of Rolando, spreading out to form a broader expanse above than below, and overlapping on to the internal aspect of each hemisphere. The centers, from above downward are, approximately, in reverse order to the position of the parts of the body corresponding. From these centers, efferent fibres lead through the white matter of the hemisphere, between the two nuclei of the corpus striatum, through the crura cerebri and pons. Fibres to cranial nerves cross, mainly to the opposite nerve origins, though more fibres pass without crossing to cranial than to spinal nerves. The course of fibres through the medulla and cord to the spinal nerves has already been considered. Thus, each cerebral hemisphere controls the opposite side of the face and body, though some few fibres of motor convection remain uncrossed, especially to the facial and trunk muscles, which commonly act bilaterally.

Common sensibility, that is touch, pressure, temperature and muscular senses, have cortical centers in the same areas as the corresponding motor supply of the particular part of the body in question. The motor cells of the cortex lie exteriorly to the sensory. Paralysis occurs most frequently as a hemiplegia, due to apoplexy in the "internal capsule," that is, the con-

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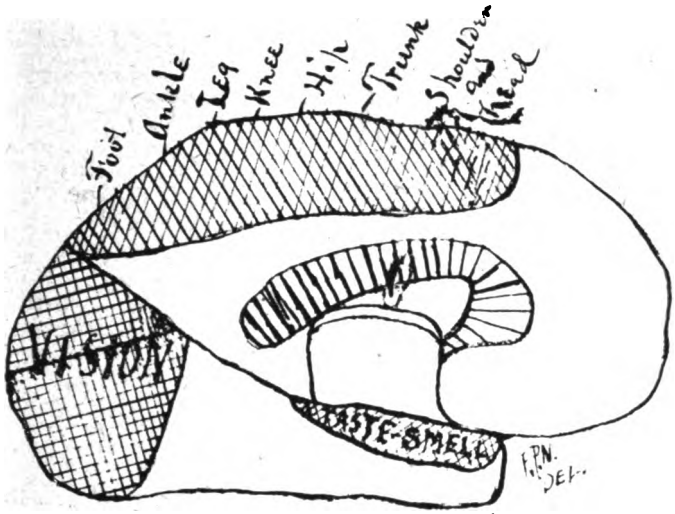
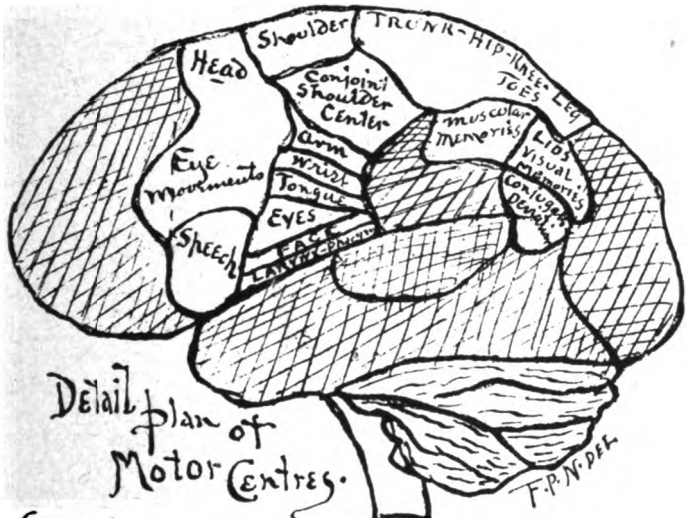


Internal Aspect of Cerebral Hemisphere (Left.)



Detail plan of Motor Centres.

(Shaded area = non-motor parts.)

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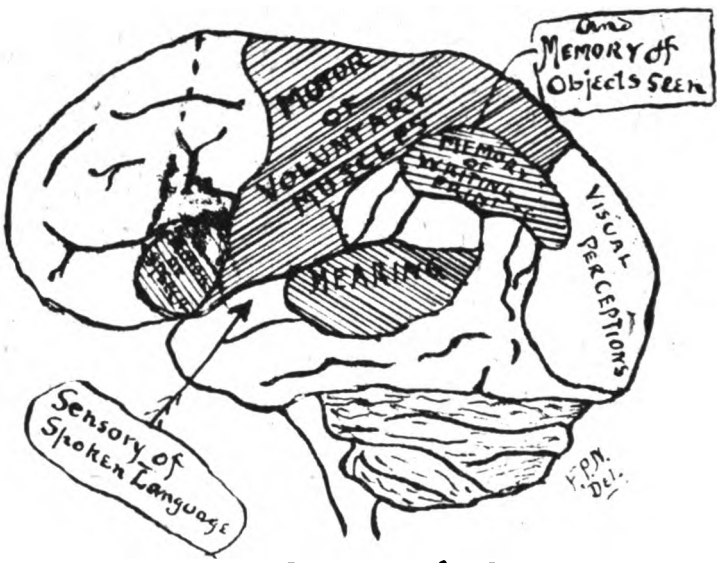
ducting fibres between the nuclei of the corpus striatum. From the anatomy of the vessels and nerve fibres, the ocular nerves are rarely affected, the special senses almost never, and sensory paralysis usually subsides after the first shock of the lesion.

Nerve fibres of the special senses, sight, smell, taste, hearing, equilibrium, apparently do not cross, although there is so free intercentral communication between the bilateral centers and the sense organs are so rarely used unilaterally, that experimental demonstration of this point is difficult. In the optic chiasm, the fibres decussate like the arrangement of reins in a double harness, so that right-sided lesion, centrally or anywhere behind the chiasm, causes blindness of the right half of each retina. On account of the purely physical crossing of the rays of light at the pupil, the visual field is lacking to the left. A large part of the posterior lobe of the cere-



The Cortical Centres.

brum is concerned in the reception, analysis, and memory of the visual sensations. The centers of smell, taste and hearing are located in the temporal lobe. That for equilibrium is not well localized. Memory centers connected with the special senses—including the afferent speech centers—are located adjacent to the corresponding sensory centers.

Muscular memories, including the ability to perform automatically, various elaborate combinations of movements, center in the inferior parietal lobule.

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The faculty of speech is very complicated, since it includes afferent, efferent and purely intellectual powers, as well as memory, and deals with both sound and sight, as well as with touch in the blind, and with the muscular sense in writing, type-writing, etc. Most animals communicate a few simple ideas by their cries, but, according to Prof. R. L. Garner, the vocabulary of the highest apes does not exceed thirty words. Domestic animals acquire a considerable sensory vocabulary, including the understanding of various commands, and of proper names Dogs, especially, often are able to follow the general course of quite elaborate conversations. Parrots, crows and some other birds are the only animals able to imitate human speech, and they often do so with considerable understanding. Occasionally, however, dogs, monkeys, etc., are taught to imitate a few words, the phonetic elements of which are adapted to their organs. While it is possible to have simple ideas without a method of expressing them, all complicated and advanced thought requires the use of words by which to afford a foundation for further progress. Children ten years of age use a thousand or more words, adults of comparatively little education, but living in civilized communities, probably understand 20,000 or 30,000 words, though they do not use nearly so many. The most extensive and versatile writers employ a vocabulary of about 50,000 words. The English language contains between 350,000 and 400,000 words, of which, a well educated person would probably understand at least half. However, the English language contains duplicate Saxon and Latin derivatives for most simple ideas, and the technical vocabulary is made up largely of triplicate, Greek derivatives. Thus, the knowledge of a few hundred roots of these languages and a familiarity with the principles of combining them, affords an understanding of an enormous number of separate words.

EFFERENT	AFFERENT
Articulate speech	Perception of articulate speech by ear
Written or printed language	Perception of such language by eye
Raised print	Perception of such language by touch

If different languages are spoken, there is a corresponding development of corresponding centers. Study in school develops, especially, the visual centers, while verbal familiarity with language develops the auditory centers. Training of the auditory center of speech by no means develops the visual center correspondingly and *vice versa*. Thus, illiterate persons understand only spoken language, while one may be able to read Latin, Greek, French or other foreign languages readily without being able to follow the simplest conversations. The use of phonetic short-hand, of telegraphy, of signal flags, etc., develops centers somewhat different from those commonly used. Similarly, the use of an inflected language, of one which dispenses with accents like the French and Japanese, or of one in which the actual length of time given to the pronunciation of vowels must be considered, as in Greek and Latin, or of actual pitch of voice, as in Chinese, affords peculiar difficulties as compared with the acquisition of a language similar to the parent tongue.

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It is obvious that actual blindness or deafness will interfere with sensory appreciation of language and motor paralysis with spoken or written efferent expression. As a rule, the motor speech centers are on the side of the cerebrum that presides over the better used side of the body—commonly on the left side of the brain, and hence aphasia is associated with right-sided paralysis. But there are special centers, afferent and efferent, for both spoken and sign-language, lesion of which will interfere with the corresponding language function, without general interruption of the receptive or motor area. Thus, there may be word-blindness without otherwise interfering with vision. The patient even sees the words and the shape and color of the letters, but they convey no idea of language to him, any more than they would to one who had never learned to read. Similarly, in word deafness, the patient hears the words, appreciates them as sounds, but not as the expression of thought. In agraphia, there is inability to express oneself in writing, though there is no paralysis of the hand, and the letters may even be traced as shapes. There is even a form of aphasia without paralysis of the muscles of speech, and the patient may utter words, but haphazard. Such interferences with speech are due to very circumscribed lesions and interference with one function does not usually cause interference with others. Thus, in the last case, the patient may say *no* for *yes*, may be able to recognize his mistake, but he cannot correct it. A person with word-deafness may be able to speak fairly well though, if he makes an error, he does not recognize it. A person with word-blindness can write from dictation, but cannot read what he has written, consequently his writing may resemble that of one writing in the dark.

Parts of the cerebral cortex, irritation of which in animals causes no definite response, and whose function cannot be accurately mapped out by the observation of human lesions, ablation of areas in animals, etc., are called silent regions. Of the chief silent regions, it is supposed that the insular lobe contains the centers for memory and intellectual use of speech, and that the frontal lobes contain centers of judgment, emotion, etc. This view is corroborated by the relative increase of the frontal lobes in animals of increasing intelligence, and by the association of idiocy with failure of frontal development. Marked disease or atrophy of one frontal lobe is not inconsistent with considerable mental power.

Pernicious Anæmia.—

℞ Syr. hypophosphites (McArthur's)..... 1 bottle

Sig.—Dessertspoonful three or four times a day. To each dose add three minims of Fowler's solution, gradually increasing dose to fifteen minims three times a day.

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Reports on Progress.

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OBSTETRICS.

IN CHARGE OF R. BRENT MURPHY, M. D.

ST. LOUIS.

Complete Primary Amputation of the Umbilical Cord. — Fifty-two pages of the *American Journal of Obstetrics* for July, 1899, are devoted to an article by Dr. Robert L. Dickinson, which he says is a plea for the application, in amputating the cord, of the surgical principles that govern other amputations. The following principles are elaborated: 1st. Mass ligature should be avoided. Hemorrhage follows the present method occasionally, because shrinkage of the gelatin loosens the seizure. Ligatures belong on bared vessels. 2d. A hernia opening should not be closed by a granulation scar. Primary union is readily substituted. 3d. If the location of the future line of demarcation is known, removal should be practiced at or beyond that point. In the case of the funis one knows where the line of separation is to be. 4th. That form of operation should be chosen which will do away with sloughing or pus production. Prevention of suppuration, of putrefaction in the stump, and of systemic infection has been attempted by means of numberless devices and dressings spread through a voluminous literature of failure. Removal alone is prevention. The obstetric means will then no longer go from a pus dressing on the baby's abdomen to the fissured nipple, the perineal wound, the catheter or to the vulva of the woman in labor. And, conversely, the septic maternal discharges will cease to endanger the child's open wound. To frankly sever the cord at the skin margin, with ligature of the vessels or suture, one or both, brings about safe, clean, prompt healing. Thereby the navel of the secondary looks like the navel of the tenth or fifteenth day under other methods.

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The Treatment of Post Partum Hemorrhage.—Modern methods of obstetric practice have fortunately almost done away with that one great bug-bear, post partum hemorrhage. Still it is occasionally encountered, and if he is not forearmed by being forewarned, it is the most alarming condition that can confront the obstetrician. In the *Medical Record*, January 13th, 1900, Dr. Edward P. Davis gives us a practical treatment for this emergency. When relaxation of the wound and hemorrhage is threatened I immediately douche the uterus thoroughly with hot salt solution, or with boiled water only, and tampon it with iodoform gauze. I am quite aware that to interfere with the uterine cavity during and immediately after labor is an important procedure, but by boiling the instruments employed, by thoroughly cleansing the hands, by the plentiful use of hot dilute antiseptic fluid, and by selecting the gauze employed for the tampon carefully, I have yet to observe a case of infection which could be traced to this manoeuver, and I have yet to be disappointed in it as a means of assisting in the prevention of hemorrhage. So soon as this is done the patient should receive a hypodermic injection of gr. $\frac{1}{15}$ of sulphate of strychnine. After this, lacerations of the pelvic floor and perineum may be repaired, holding the womb to prevent its relaxation. Two drams of fluid extract of ergot should now be given by mouth, or an injection of aseptic ergot beneath the skin. The physician must remain at the bedside until the patient has fully reacted from delivery, holding the uterus firmly, but not fatiguing it by unnecessary manipulation. In grasping the uterus care should be taken that pressure is exerted upon the anterior and posterior walls only, avoiding the tube and ovary, as well as the fundus, for inversion, with its dangers, has followed the "dumpling" of the fundus. Should these measures not be entirely efficient, gr. $\frac{1}{30}$ sulphate of strychnine with gr. $\frac{1}{100}$ of atropine may be injected, and the ergot repeated. The patient's head should be kept low, and if the pulse is lacking in volume a rectal injection of freshly made coffee, well diluted, will be found of advantage. The patient is catheterized if needed, the external parts kept scrupulously clean by irrigation with bichloride of mercury solution 1 to 8000, or with lysol one per cent, then powdered with boracic acid. Sterile napkins, or napkins soaked in bichloride, 1 to 2000, and dried, are constantly worn. In from 24 to 36 hours after delivery the gauze is removed and the wound thoroughly douched with decenormal salt solution at a temperature of 105 to 110 F. To secure involution the patient is given by mouth gr. $\frac{1}{40}$ strychnine sulphate, and gtt. xx fluid extract of ergot every six hours for the first 24 hours after delivery, then continued, as the condition of the patient and judgment of the physician may dictate. Hemorrhage from laceration of cervix, pelvic floor or vaginal tissue, necessitates immediate suture of the lacerations. If any portion of placenta membranes, or large clot remains in the uterus it is the obstetrician's duty to remove them at once with hot douche, finger or blunt curette before tamponing.

Subcutaneous Saline Injections in Hemorrhage and Eclampsia.—By Robert Jardine, M. D. (*Glasgow Med. Jour.*, March, p. 169).—Injections of large quantities of saline solution into the cellular tissues have proved

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beneficial in obstetrical emergencies. The two conditions in which the writer has used this method are collapse from hemorrhage and shock and eclampsia. In the former the aim is to increase the amount of fluid in the circulation, which is soon made manifest. The pulse becomes stronger, and the collapse passes off. In cases of very severe hemorrhage life may be saved, and in those cases in which recovery would have occurred without it, convalescence is much assisted. In the eclampsia the aim is to flush the kidneys, and thus rid the system of the poison, the diuretic action has been very marked in all the cases which have recovered, or live long enough to give it time to act. The apparatus required is very simple—a medium-sized trocar and canula, six feet of small tubing, a glass filler, and a small piece of adhesive plaster. The apparatus can be thoroughly sterilized by boiling. The solution, in case of hemorrhage, is made by adding a teaspoonful of common salt to a pint of boiled water. For eclampsia the same amount of equal parts of bicarbonate of potash and common salt is used. The temperature should be 100°. The writer injects into the axillæ, or under the breasts, but any part of the body where the tissue or lax is suitable. Aseptic precautions should be taken. A large, tense swelling forms. If it is in the axillæ there will be pain and numbness in the arm from pressure on the nerves, but this soon passes off. A pint will be absorbed in from ten to fifteen minutes. In a number of cases one writer has transfused directly into a vein, but he is not satisfied that the results were as good. The subcutaneous method is much easier, and there is no risk of introducing air into the circulation. Opening a vein and introducing a canula is not always an easy matter, and may take several minutes, while in the subcutaneous method a few seconds is all that is required before the fluid is being absorbed. The absorption takes place through the lymphatic system, and by the time the fluid reaches the circulation it will be in better condition to mix with the blood than when thrown directly into the vessel.

Adherence of Membrane to the Cervix an Important Cause of Tardy Dilatation of the Cervix.—Lohlein (*Centralblatt fur Gynakologie*, No. 19; *International Medical Magazine*, September) records a number of cases in which this condition has been the cause of delayed first stage of labor. This adherence is due to a cervical or corporeal endometritis. He advises inserting the finger and detaching the membranes from the wall of the cervix, and, if necessary, rupturing them. The adherence of the lower pole of the ovum to the cervix delays the unfolding of the cervix and prevents the descent of the bag of waters, and the consequent dilatation of the internal os. —*N. Y. Med. Jour.*

Can Ergot Cause Rupture of the Uterus?—Bong (*Monats. f. Geburts, a. Gynak.*, June, 1899, p. 900) in a meeting of the Cologne Obstetrical and Gynecological Society (February 10, 1899), discusses a case of uterine rupture in a II-para, to whom a midwife had administered four grains of ergot within a short time. The pains became much stronger for a while, and then suddenly ceased with slight hemorrhage into the vagina. Bong was summoned, and found the fetal head in the pelvic inlet, and os dilated as

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large as a silver dollar. No fetal heart sounds. He made a diagnosis of atony, and used expectant measures. On the next afternoon the patient collapsed. Examination revealed a right-sided uterine tear. Delivery accomplished by turning, and manual extraction. Autopsy showed much blood in the peritoneal cavity. Bong was of the opinion that the ergot had produced a tetanus uteri, and that the locality of least resistance had ruptured. The head was in the second vertex position, and the tear occurred in the right side of the lower segment. Ergot is doubtless at the bottom of many a case of "spontaneous rupture" of the uterus at the hands of midwives. In discussion Frank related a parallel case, and agreed with Bong in attributing the blame to ergot.

Prevention and Treatment of Puerperal Eclampsia.—In the *Therapeutic Gazette*, of December 15, 1899, is a symposium on the above subject. The contributors are men of wide experience, and as the condition is one of great importance and is met with by every practitioner, what they have to say is well worthy our attention. Davis, the first contributor, says that although the fits are easy to control the condition causing them, the accumulation of poisons in the body, is difficult to remove. One out of eighty-five or one hundred women having no care during pregnancy have eclampsia; mortality 24 per cent. Examination of urine is useful in diagnosis. The presence of a small amount of albumin is significant only when there is kidney debris. Solids are diminished in this condition. The clinical phenomena are more important. Headache, melancholia stupor, variations in appetite, lack of proper secretion of skin, and constipation are early symptoms. Treatment at this stage should be addressed to the stimulation of the excretion. Diet of milk, bread and butter, vegetables and fruit, with plenty of pure water and fresh air are important. The skin should be kept active by warm baths. Drugs should be used to empty the bowels and and increase the secretion of urine. A vigorous purge, or rectal irrigation, if necessary, should be followed by cascara. Calomel in one-fourth grain doses night and morning is useful if the liver is at fault. Vichy water may be freely employed; potassium salts must be avoided. Tea and coffee in excess lessen the excretion. In the presence of convulsions, chloroform, veratrum viride, nitrite of amyl, will control the patient. Very free excretion should be quickly established. All reflex irritation in the uterus should be removed; if the uterus and child are quiet, rapid delivery will do no good. The patient should be placed in a hot, moist pack, calomel administered and rectal irrigation performed. The author thinks that the introduction of large quantities of normal saline solution by hypodermoclysis is more advisable than bleeding. The use of large doses of morphine, chloral and potassium bromide or of pilocarpine is not advisable. After the intestines have been emptied injections of peptonized milk and whiskey may be used to stimulate the patient. Digitalis will sustain the action of the heart. If elimination cannot be started, and labor does not begin, the child should be delivered, by Cæsarian section if the facilities are at hand. Care should be taken that the child is not chilled. If breast milk is not available pancreatized diluted cow's milk may be used. The prognosis depends on the

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extent and duration of the degeneration, and hence power of secretion, of the kidney and liver epithelia. Edgar warns against making merely a perfunctory examination of the urine in pregnancy. A high arterial tension, headache, gastric disturbances, physical and mental lassitude are premonitory symptoms of eclampsia. He gives the line of treatment as follows: Reduce the amount of nitrogenous food to the minimum by giving an exclusive milk diet. An abundant supply of fresh air and water and light exercise promote elimination. Empty the bowels with daily doses of colocynth and aloes followed by a saline in the morning. The author recommends a tablet composed of calomel, digitalis and squill, each one grain, and pilocarpine muriate one-twentieth grain. Curative treatment.—Control the convulsions by chloroform, morphine, veratrum viride, or chloral hydrate. Edgar prefers chloroform. Empty the uterus under deep anesthesia by some method that is rapid and that will cause as little injury to the woman as possible. Rapid manual dilation and extraction will usually do; if not, the cervix should be incised. Excretion is promoted by securing catharsis by croton oil, compound jalap powder, or calomel followed by salines or enemata. Diursis is obtained by cupping over the kidneys, administration of glonoin or veratrum viride. The action of the skin may be stimulated by hot packs. Bleeding is of doubtful value. Saline infusion is of value. In coma oxygen should be given freely. Alcohol and strychnine serve well as stimulants.

King calls attention to practically the same points as the two preceding. The convulsions are of uremic origin. Cathartics, diuretics and diaphoretics should be given. Large doses of veratrum viride with morphine, or a cautious inhalation of chloroform are used to control convulsions. Deliver as soon as possible, avoiding violence.

Norris says that all we know of the pathology of eclampsia is, that it is due to an altered physiological state and increased irritability of the convulsion centre. The treatment is necessarily empirical. Excretion should be increased and irritability lessened. For prophylaxis, diuresis, catharsis, and diaphoresis obtained by forced ingestion of fluids, hot immersion baths, and saline cathartics, rest in bed and a milk diet to reinforce this treatment. The author is strongly in favor of prompt delivery as soon as there is a pronounced convulsion. After this he continues the eliminative treatment. He gives sedatives, large doses of bromides with chloral, almost as a routine. He has observed little good effect from bleeding or infusion of saline solution, or from the use of veratrum viride. Norris treats the subject in much the same manner as Dr. Davis. The accumulation of toxin being the cause, the examination of the urine for albumin is not sufficient for prophylaxis; solids should be estimated and clinical symptoms noticed. He favors calomel as a laxative before the symptoms have developed, when he gives epsom or Rochelle salts. A milk diet is advised. Large quantities of pure drinking water and rectal injections of saline solution are relied on to produce diuresis. If there is a slowly and steadily developing toxemia which will not yield to treatment, the woman should be delivered by a conservative method. Convulsions may be controlled with chloroform or chloral, by enema if necessary; veratrum viride, venesection and saline infusions

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have given satisfaction. Pilocarpine should not be employed unless very cautiously. He calls especial attention to the good effects of Epsom and Rochelle salts and to the importance of avoiding violence in delivering.

A Case of Septicemia Post-Abortum.—In a recent number of the *American Gynecological and Obstetrical Journal*, Dr. R. H. Lawrence of Chicago reports the following interesting case: Mrs. D. A. age 23. Married 5 months. Aborted October 1. Was called to see her at noon, October 5. Found patient in bed, great difficulty in breathing, with pain in abdomen which was very tympanitic and sore, foul odor—very noticeable during examination. Gave history of previous good health, but continuous flow of blood from vagina for five days. On examination found clots of retained placenta. Temperature 103°. Pulse 122. Used curette and gave carbolized douche. 8 p. m: Temperature 104°. Pulse 150. Gave stimulants and intra-uterine douche Borolyptol ʒii, and vaginal douche carbolized water. Consultation with Dr. H. P. Nelson. Prognosis very doubtful. Diaphoretics and stimulants ordered every half-hour. Same day 11.30 P. M: Temperature 101.6°; pulse 126. Vomited freely, mild perspiration, light sleep. October 6, 5 A. M.: Temperature 104. 4°; pulse rapid and weak, skin dry—ordered diaphoretics every 15 minutes for 4 hours, and stimulants every hour. Surrounded with hot-water bottles. 2.30 P. M.: Temperature 104°; Diaphoretics every 15 minutes. Stimulants every half-hour. Intra uterine douche Borolyptol ʒii. 6 P. M. Temperature 103°; pulse 130. Consultation with Dr. A. McDiarmid. Curetted again under full anesthesia and used 1.3000-bichloride solution as douche—this procedure was followed by a severe chill, abdominal tenderness and involuntary bowel evacuations. At 8.30, temperature had risen to 105.5°; pulse 140. October 7, 10 A. M.: Temperature 100.2°; pulse 108. During the day temperature rose gradually, and at 6 P. M. was 104.4°. Then gave intra-uterine douche bichloride 1.4000, which was followed as before, by very severe chill, abdominal pain and involuntary bowel movements; at 9 P. M., temperature had risen to 106.4°, pulse 150, respiration 36; patient very restless. October 8, 1 A. M.: Temperature 102.6°; pulse 120. Stimulants and diaphoretics continued, but hot-water bottles removed. Temperature at 2.30 P. M. had dropped to 101°. Intra-uterine douche borolyptol ʒii. Vaginal douche borolyptol solution. After this temperature continued below 100° until October 9, at 11 A. M., when it rose to 102.8°. Borolyptol douche repeated, several large clots washed away, no pain, no chills as after bichloride, but a rather restless night. Temperature continued low until noon, when borolyptol intra-uterine douche again repeated, after which patient slept for three hours. October 10, 10 A. M.: Temperature 100.2°. Borolyptol ʒii intra-uterine douche and a similar douche at 10 P. M. These douches were repeated twice a day until October 15, during which time temperature did not rise above 100°, discharge gradually decreased, and my attendance ceased October 21, when patient had fully recovered. I am very much pleased with the action of borolyptol in this case as compared with mercuric bichloride—no pain, chills, or rise of temperature followed its use, and its action was in every way superior to that of the sublimate.

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MEDICAL MELANGE

Phenacetin—Bayer.—The profession has been lead into an error by the report, that the patents on certain of the products imported by the Farbenfabriken of Elberfeld Co. had lately expired. It seems that the German patent did expire on phenacetin, but that in no way affects the American patent, which has about seven years yet to run. In the meantime the only way to get the genuine phenacetin, aristol, sulfonal, etc., is to see that it comes from original packages, the labels of which will invariably bear the name, the "Farbenfabriken of Elberfeld Co, 40 Stone St., New York." These goods have become absolutely essential to therapy, and it is well for the profession that a vigorous fight on substitution is being waged by the manufacturers and their American representatives.

Salophen in Acute Articular Rheumatism.—To avoid a possible recurrence of the symptoms of this disease, even when salicylic acid has been employed for a few days, Mosler(*Deutsche Med. Woch.*) resorts to the use of salophen in doses of 30 to 45 grains per day, after the acute symptoms, such as pains, swelling of the joints, and fever, have been set aside by the previous use of the salicylate. The salophen thus employed must be used for several days. According to the author, the drug is free from any deleterious effect on the stomach or the nervous system; he administered as large doses as from one to two drachms daily, for several days, without any harm. It is also useful in rheumatic chorea, and serves as a reliable analgesic and antineuralgic.—*Boston Medical and Surgical Journal,* November 9, 1899.

The New Substitute for Sodium Salicylate.— Dr. C. F. Floeckinger (*Medical News,* November 18, 1899) calls attention to a new combination of salicylic acid which has been introduced under the name of aspirin, and which he considers a most valuable substitute for salicylate of sodium for the following reasons: (1) Its agreeable taste. (2) Its freedom from irritating effects upon the stomach. (3) The absence of tinnitus aurium after the administration of physiologic doses. (4) The absence of cardiac depression. (5) The fact that it does not impair the appetite even during prolonged administration. His experiments on animals show that aspirin is practically undecomposed in the stomach, but is gradually split up in the alkaline intestinal juice. It was found to have the same therapeutic action as salicylate of sodium, but without its disagreeable effects. Aspirin should be administered either in wafers or mixed with some sugar and water, and when given in this manner it was never necessary to suspend its use in consequence of gastric irritation, and hence a cure could be obtained at an early period. The class of cases in which aspirin proved of service comprised acute and chronic articular rheumatism, pleurisy, and acute and chronic muscular rheumatism the remedy proved extremely serviceable, and produced a cure within a short time. In articular rheumatism it promptly reduced fever, diminished the pain, and caused the disappearance of the swelling. Unlike sodium salicylate, aspirin increases the motor activity of the heart, and in consequence of this influence cardiac collapse can be excluded during its use.

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"The Alma," Alma, Mich., is a perfect health resort. Recover health and strength amid pleasant, homelike surroundings. You will be in the care daily of physicians of national reputation. Full equipment of the most approved remedial appliances. Two valuable and distinct mineral waters especially helpful in the relief of rheumatism, skin, kidney and nervous diseases. Everything strictly first-class and modern. Beautiful book for the asking.

Antiseptic or Aseptic?—It is seldom that two words of similar form and similar meaning fail to excite discussion, the overlapping of meanings makes the use of the wrong word not only a frequent possibility, but also a frequent probability, and sticklers for absolute accuracy are scandalized. Aseptic and antiseptic are a fruitful source of discussion. We have yet to learn that the confounding of the two has ever been responsible for harm to the human race, or has affected the fate of nations, and we are inclined to class it with such vexed questions as the century problem. Still it is a fact that some one has seen fit to object to the statement of the Norwich Pharmacal Co., that they put up unguentine in an *antiseptic* container, and in all probability the use or misuse of the adjective seems to him of vital importance; to the writer it does not seem so momentous. "Antiseptic" gives us a feeling of security beyond that conveyed by "aseptic," and as there is room for no misconception we think the term was used advisedly.

Early Recognition of Pulmonary Tuberculosis.—(Knopf, *Jour. A. M. A.*, December 9, 1899).—Bacilli are not found in the sputum in the first stages of consumption. Tuberculin and natural or artificial serums are unreliable. Among predisposing factors the author mentions the following: Man is more disposed than woman; the poor than the rich; those employed at confining indoors occupations than outdoors. Age, between 17 and 35. The importance of heredity has been exaggerated. Dissipation and depressing circumstances are important. Of phthisis-generic diseases he mentions those of the respiratory tract, eruptive fevers, grippe, alcoholism and syphilis. Of the early symptoms the author mentions especially the following: There is sometimes a neurasthenic or melancholic condition. The cough occurs at first only in the evening or reclining, later in the morning. Soon expectoration commences, from which time bacteriologic examination should begin. Early pulmonary hemorrhages are sometimes actually of benefit to the patient. Thermometry is of value only when practiced at regular intervals. Early tachycardia is a grave symptom. The vibration of the affected portion of the lung is recognized by the patient as a disagreeable sensation in that part of the organ, and is sometimes of value in early diagnosis. The peculiar anemic condition of the larynx and general appearance of the mucous membrane is also of value. Weight, respiratory capacity, and chest measurement must be considered in relation to the height. Knopf has not been able to find a pulse characteristic of the pretuberculous state. A low arterial pressure is suspicious. Of the physical methods of diagnosis, percussion may tell little in the early stages, but should be carefully done. The author considers "the low inspiratory murmur characterized by roughness, when persistent and localized in one of the apices, one of the surest and earliest signs of pulmonary tuberculosis." The X-ray should be considered only as a means of corroborating a diagnosis. Knopf has experimented with the agglutination test, and from his experience concludes that it is not of very great value in early diagnosis.

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increases the secretion of the digestive fluids, relieves congestion of the mucous coats of the entire alimentary canal and restores the assimilative processes. Dose—one teaspoonful before meals; the dose before breakfast preferably in hot water. Samples to physicians who will pay express charges.

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THERAPEUTIC NOTES.

BROMIDIA IN THE TREATMENT OF EPILEPSY.—The New Albany Medical Journal for November, 1898, contains an article on "Epilepsy Treated by the Use of Bromidia," by T. Edward Converse, M. D., of Louisville, Ky., which, after discussing the use of medicines chiefly relied upon in the treatment of that disease, and giving the needful hygienic measures in considerable detail, concludes by referring to "the question often raised: How long will the patient have to keep up the treatment?" If the bromides are given, they should be continued for atleast two years after the last convulsion, or if combined with the chloral hydrate in the form of a bromidia, a year and a half is sufficient in most cases. If the patient is having several attacks duringthe day, a teaspoonful of bromidia after the attack and repeated in an hour will abort the next attack; but, as a rule, one teaspoonful will be sufficient.—Sanitarian, April, 1899.

Mr. W. D., aged 23, residing with his parents on Madison street, a few blocks from my office, called me in some weeks ago for treatment. I found the young man in bed and in very bad condition. He was not only suffering from a severe injury received whilst following his vocation, but also with a severe cough with copious "coffee-ground" expectoration, which, upon microscopical examination, proved to be tubercular. It is now about two weeks since I started him on "Maltine with Creosote" and to my astonishment found upon my last examination that his cough and expectoration had both ceased. I find, upon palpation and phenendoscopic auscultation, great improvement in his right lung as well as the apex of the left one. I can't speak enough in favor of "Maltine with Creosote" and shall use it upon all my pulmonary patients hereafter.—M. A. Auerbach, M. D., New York.

VICK'S VISION OF LOVELINESS.—The receipt of Vick's Floral Guide for 1900 is a signal for spring and summer plans. Make your home beautiful this season. In this connection we are reminded of the words of a friend who recently returned from an Eastern trip. He said: "I never have been so overwhelmed with acres—yes, acres—of simple grandeur as when our train passed the Vick flower farm at Despatch, N. Y. Before us were immense strips of beautiful clear pink—sea shell pink they call it—reminding one of the charming tint on the lip of the conch shell of the Florida Keys; the most pleasing tint in the whole range of color. These huge strips were alternated with similar strips of white, and this great garden of the acres represented the leading asters of the day, Vick's Daybreak and Purity." Make a note of this, for you want these asters sure. Write for the Garden and Floral Guide. Describes in full the new departure in seed selling, and mention what you intend to plant, to James Vick's Sons, Rochester, N. Y.

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CHRONIC DYSPEPSIA SUCCESSFULLY TREATED WITH H_2O_2.

By Geo. A. Gilbert. M. D., Danbury,

Peter H., aet. 40. Hungarian, farm laborer, applied for treatment at my office on July 1, 1899.

On examination it was found that he was slightly feverish, pulse rapid, tongue tongue flabby and heavily coated, while the teeth and entire cavity of the mouth were covered with a foul-smelling sticky mucus. That the stomach received, in the process of starch digestion, little or no assistance from the salivary glands of the mouth was plainly apparent. In deciding on the mode of treatment it was obvious that lack of the usual amount of gastric secretion must be met by restoring the physiological conditions upon which the secretion depends. In other words, in order to relieve the inflammatory condition of the gastric mucous membrane and restore the function of the peptic glands, antiseptics were required. The patient therefore was furnished with a flask of Ozonized water, made of one part Hydrozone to four parts of water, and directed to wash out his mouth every night and morning, thoroughly cleansing the tongue, teeth and gums of the unhealthy mucus and any pathogenic germs it might contain. To destroy the microbic elements of fermentation in the stomach and dissolve the tenacious mucus there, a mixture of one ounce of Hydrozone with two quarts of sterilized water was made, and half a tumblerful directed to be taken half an hour before meals. Having thus procured a clean surface in the stomach, the patient was advised to take immediately after meals a drachm of Glycozone, diluted in a wineglassful of water, for the purpose of enhancing cellular action and stimulating healthy granulations. Of course he was ordered to select his food with care and eat regularly.

The result of this simple procedure was magical. Although for the first two or three days there was some discomfort after eating, this soon disappeared, and at the end of a fortnight the patient reported that for the first time in six years he was enabled to eat his meals without dread of subsequent distress and eructations of gas. (In the opinion of the writer the fermentation was thus quickly subdued by the active oxidation resulting from the liberation of nascent oxygen.) The treatment was continued in this manner for another month and then gradually abandoned. On September 1st the patient came to the office, expressed his eternal gratefulness, said that he weighed 185 pounds and believed himself to be completely cured.

AN INTERESTING EXPERIMENT

At a meeting of the Western Surgical and Gynecological Society the last week of December an exceedingly interesting incident took place. In 1870 Messrs. William R. Warner & Co. filled an order for pills for Messrs. Chilcote & Cook of Washington, Iowa. One of the bottles being still on hand, it was forwarded to Dr. Wilton McCarthy of Des Moines, Iowa, to test the solubility of the pills before the above-mentioned society. The following correspondence explains the results fully:

Washington, Iowa, Dec. 23d, 1899.

W. W. McCarthy, M. D., Des Moines, Iowa.

Dear Sir: Having some pills manufactured for us by William R. Warner & Co. in the latter part of 1870 (at the request of Dr. W. E. Fraser, then a practicing physician in this place), which are still in good condition, and thinking it might be of interest to the physicians who meet in Des Moines during the coming week, to see a pill made twenty-nine years ago, in as good condition as these are, we forward them for your and their inspection.

A manufacturer who places on the market goods which stand the test these have is worthy of commendation. Yours truly,

(Signed.) CHILCOTE & COOK.

State of Iowa,
County of Washington, ss.

Subscribed and sworn to before me this 23d day of December, 1899.

(Signed.) L. E. LATTA,
Notary Public.

Des Moines, Iowa, Jan. 1st, 1900.

William R. Warner & Co.

I am pleased to inform you that the pills which were made by your firm in 1870 and sent to me by Chilcote & Cook of Washington, Iowa, were tested as to their solubility at the meeting of the Western Surgical and Gynecological Society held in our city last week. They were readily soluble in water at a temperature of 100 degrees, and were completely disintegrated at the expiration of fourteen and a half minutes. Respectfully. (Signed.)

WILTON McCARTHY, M. D.

Messrs. Warner & Co. have had on exhibition since 1873 a mahogany case filled with sugar-coated pills. After a quarter of a century they do not show the effects of age, but are as good as when first made, which means they are perfect pills.

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The Medical Fortnightly.

Issued Tenth and Twenty-fifth of Every Month by the Fortnightly Press Co.

UNDER THE EDITORIAL DIRECTION OF

FRANK PARSONS NORBURY, M. D. AND THOS. A. HOPKINS, M. D.

Secretary: CHARLES WOOD FASSETT.

A COSMOPOLITAN BIWEEKLY FOR THE GENERAL PRACTITIONER

Editorial Offices in St. Louis, Chicago, Cincinnati, Jacksonville, St. Joseph, Kansas City, and Pueblo, where specimen copies may be obtained and subscriptions will be taken.

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Volume XVII **MARCH TENTH** **Number 5**

Editorial Department.

Small-pox.

THE prevailing epidemic of small-pox which exists throughout the United States, from Maine to California, while being of mild type, yet is causing much sickness and suffering—some deaths, interruptions of travel, interference with business, the closing of schools, churches and other places of assemblage and an inestimable financial loss. In view of its prevalence in the State of Illinois, the State Board of Health of Illinois, through its executive officer, Dr. J. A. Egan, has taken wise precautionary measures to inform the physicians of the State and the local health authorities regarding the peculiarites of the present epidemic, and to enforce the necessity of vaccination as a protective measure against small-pox.

We note with considerable interest that the use of the glycerinated lymph is advised by this board, and, as our experience has confirmed the value of this lymph, we feel that it is incumbent upon every physician to urge its use, and further, to urge the improved method of vaccination. The modern aseptic methods of surgery should be strictly enforced in the simple operation of vaccination. The arm should be thoroughly washed with sterilized water, afterwards cleansed with alcohol or ether, or else thoroughly cleaned with sterilized gauze and antiseptic soap, so as to insure a thoroughly clean skin. The scarification should be made with a sterilized needle, and the vaccine applied as is recommended in the directions for the use of glycerinated lymph, after which a shield should be applied, and this held in place by adhesive plaster, over which is placed a sterilized gauze bandage. The wound is then to be left untouched for at least seven or eight days, at the end of which time, if the vaccination has been a success, the wound will then show it and it can be redressed as the occasion demands. It is of especial importance to treat this operation just as if preparation for an abdominal section was being made. By pursuing such a method there will be no mixed infection, swollen arms, great febrile disturbances and possibly septic infection.

This subject is of great importance and should be studied by all physicians interested in keeping up with the spirit of progress—up with the times. Again, it is important that the physicians familiarize themselves

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with the differential diagnosis between small-pox and the disease with which it is apt to be confused; of these, chicken-pox or varicella, is the one disease which seems to have caused the trouble, and especially in Illinois and Indiana.

In one city in Illinois the mistake in diagnosis cost that municipality over $14,000, thus showing that there is a financial side to this great question, besides the inconvenience and interruption of all of the affairs of such a community. This $14,000 only represents the city's outlay of money to forestall the spread of this epidemic, while the trade lost to the city—to say nothing of other interference with business, social and educational interests, will show that it is impossible to calculate the real financial loss to that community. It behooves physicians to bear in mind that they are the guardians of public health, and a mistake in diagnosis means not only the loss of professional spirit and pride, but injures the lives and business of those of the community in which he lives.

We take pleasure in calling attention to a circular of information, issued by the Illinois State Board of Health, in which the points of differential diagnosis between chicken-pox and small-pox are thoroughly discussed, and as this circular is of such value, we feel that every physician should be possessed of a copy, and have it near at hand, to refresh his memory on the points that are liable to cause confusion.

As Dr. Egan well says, there is no excuse for small-pox in a community; the disease should be stamped out, and if a few of the members of the Anti-Vaccination Society, who have done so much to cause distrust of this simple operation could be ducked in the water, at a public ducking pond, it probably would be of service to the community in which they live. It is these fanatics, together with the illiterate, who are responsible for the spread of this great epidemic. Our would-be scientists—so-called christian scientists—who are responsible for the epidemic spread in Chicago and in the State of Indiana, and until these forces can be corralled, we will expect from time to time to hear of the appearance of small-pox throughout this part of the country.

We congratulate the State Board of Health on their vigilance in helping to suppress small-pox as it appears in the State of Illinois. It remains with the different communities, cities, and executive health authorities of the State to lend their assistance to the State Board to drive this epidemic entirely out of the country. F. P. N.

ERRATUM.—In issue of February 10, MEDICAL FORTNIGHTLY, page 88, fifth line of first paragraph, a typographical error occurs. In place of the words "the various bacteria just mentioned," read "the disinfectant, Salo."

SOCIETY MEETING.—The Medical Society of the Missouri Valley will meet in Hamburg, Iowa, March 15. Dr. Jacob Geiger, of St. Joseph is President of this association, and Dr. V. L. Treynor of Council Bluffs, Secretary.

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Keeping up with the Procession.

THE *Saturday Evening Post* pays especial attention to its editorials which always are hopeful, optimistic and inspiring. Right living, progress, true culture and encouragement ring out in these up-to-date contributions. In a recent issue the following editorial appeared: "Keeping Up With The Procession" is its title, and it is both timely and appropriate for physician's reading. It is full of wholesome suggestions and should be read and digested.

"Life is composed of adjustments. From one point of view life is adjustment. The infant adjusts itself to seeing, feeling, talking. The child goes to school and adjusts itself to instruction. Once in school, new teachers and new objects of study require new adjustments. The graduate must adjust or adapt himself to the ways of buisiness or professional life. As a bridegroom he is again face to face with new conditions, new duties, new obligations, and he must study them and adapt himself to them. As a father, still others confront him and call for further adoption. In short, there is no period, no condition of life free from the necessity of adjustment. Inability to adjust one's self to new conditions means stagnation; then death. The survival of the fittest means nothing more than the survival of those fit or able to adjust themselves to the constantly varying environment. There is constant change of environment; there is need of constant adjustment to it.

What is true of life in general is true of life in particular. Take man in relation to his business or profession. In the former there is a constant change requiring constant study and adoption. The successful business man is he who sees the changes and accordingly adapts himself to them. How often do we hear it said of an old firm, that business grew away from them. What does it mean? Simply that the firm stood while business changed.

In professional life the same principles applies. The surgeon who refuses to adopt the principles of antiseptic surgery has fewer and fewer patients, and the lawyer who knows only the common law of bygone days has no clients. Medicine of today is vastly different from medicine of fifty years ago. It has been revolutionized. Law, the most conservative of professions, the conservator of customs, nevertheless, changes greatly in fifty years, both in methods and subject-matter.

The constant need of adjustment is nowhere keenly felt than among the industrial classes, and in no other class is there less adaptability. The continuous line of improvements in mechanical devices continuously throws large numbers of employees out of adjustment. No one would halt the march of mechanical improvement, and yet we feel sad when we contemplate the condition of the men and women who are thrown out of employment, and are unable to adapt themselves to the changed conditions. We recall the outcry against the introduction of sewing machines, and yet the sewing machine was a great blessing when viewed from a broad standpoint, although sewing women in great numbers suffered. But no one now seriously proposes that we go back to hand-work. The women suffered, not because of the machines, but because they lacked the power of adjust-

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ment. We are witnessing the enactment of the same tragedy at the present time in the introduction of the type-setting machines. Our sympathy goes out to the hand-setters, but we realize that they must adjust themselves to the change or go to the wall.

What is true of individuals is true of communities, of nations. There has been a continuous adjustment of American governmental methods to meet new conditions and new demands. America, because she has been able to do this, is known as a growing nation; Spain, because she is unable to do this, is known as a decaying nation. Is there not a moral in all this?"

NOTICE.—The report has been circulated that the New Orleans Polyclinic has been suspended on account of small-pox in New Orleans. This statement is absolutely false. The Polyclinic has had a continuous course since November 20, and will continue until May 12. The small-pox situation in New Orleans has at no time justified any apprehension on the part of students attending the Polyclinic or on the part of those who might wish to do so.

ISADORE DYER, M. D.,
Secretary, New Orleans Polyclinic.

The Reviewer's Table.

Books, Reprints, and Instruments for this department, should be sent to the Editors, St. Louis

AMONG modern investigators whose discoveries have added much of valuable material to medical science, the name of von Helmholtz occupies a leading position. His discoveries in optics, as well as nervous physiology, electricity, etc., have done much to render our knowledge in these departments more complete. This volume, the latest of the Masters of Medicine Series, deserves mention for the interesting account which is given of the life of von Helmholtz, not only an excellent biography being given, but his various discoveries, together with his method of investigating being minutely described. Because of the modesty of this great "interpeter of Nature," his biographers are mostly unsatisfactory. But in the present volume we meet with a remarkable exception, the author's personal acquaintance with the man making this possible. The matter is historically arranged, and in the course of the story, numerous other great men of the period are introduced, thus still further enhancing the already great value of the book. An excellent portrait is also found here. We welcome with pleasure the appearance of this additional volume of the series. We find it to be printed and finished in the same careful manner as previous volumes, and do not hesitate to recommend the book to every physician who desires to have his library complete and up-to-date.

HERMANN LUDWIG FERDINAND VON HELMHOLTZ. By JOHN RAY M'KENDRICK, M. D., LL. D., F. R. SS. L. and E., Professor of Physiology in the University of Glasgow and Fellow of the Royal College of Physicians of Edinburgh. New York, LONGMANS, GREEN & CO., 189. $1.25.

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MUSSER'S MEDICAL DIAGNOSIS.—A Practical Treatise on Medical Diagnosis. For the use of Students and Practitioners. By JOHN H. MUSSER, M. D., Professor of Clinical Medicine, University of Pennsylvania, Philadelphia. New (3d) edition thoroughly revised. Octavo, 1082 pages, with 253 engravings and 48 full-page plates. Just ready. Cloth, $6.00, net; leather, $7.00 net. Philadelphia: LEA BROTHERS & CO.

THIS is the most comprehensive work on medical diagnosis in the English language. It is especially meritorious in its complete and methodical presentation of the objective signs of disease, the subjective symptoms and the ways and means of properly interpreting their significance and importance. The newer methods of laboratory diagnosis are exhaustively presented. Students who have been fortunate enough to have observed Musser in his elaboration of medical diagnosis will recognize in this treatise the same painstaking thoroughness; the attention to details and the ability to see and differentiate, almost instinctively, the signs and symptoms of disease. Musser's Medical Diagnosis deserves all the success and popularity which it has achieved through various editions. Each edition has practically been rewritten on every call, this is shown in the comparison of the texts and by the introduction of new matter and illustrations. In this edition will be found fifty new engravings and thirty-seven full-page colored plates. Thirty-two plates present in a novel manner the entire subject of physical diagnosis. The publishers are to be complimented on the excellent press-work throughout, and especially on the colored plates. Physicians need this work, because it puts them in touch with the newer methods of diagnosis, which, as they well know, is the foundation upon which rests the whole of internal medicine. Students will find it the same reliable guide which has characterized it from the beginning. F. P. N.

AN EPITOME OF THE HISTORY OF MEDICINE. By ROSWELL PARK, A. M., M. D., Professor of Surgery in the Medical Department of the University of Buffalo, etc. Based upon a course of lectures delivered in the University of Buffalo. Second Edition. Illustrated with Portraits and other Engravings. 6½x9¼ inches. Pages xiv-370. Extra Cloth, $2.00 net. The F. A. DAVIS CO., Publishers, 1914-16 Cherry Street, Philadelphia.

WHEN a student begins the study of any science it is but natural to suppose that he would first study the history of that science, and gradually work up to its latest developments. It is, therefore, to be deplored, that the medical schools have deviated from this rational plan, and seem content to teach the students only the science of medicine as it exists today. But a study of the history of medicine is valuable, because it is full of examples of mistaken observation, judgment and deduction. It also stimulates a love for our profession and a devotion to the healing art. Dr. Park's "Epitome of the History of Medicine" is interesting and instructive from cover to cover. In 370 pages the author has brought together the most important facts and events of medical history, This work should be in the library of every physician, and it is to be hoped that medical institutions will require students to become familiar with its contents before undertaking the usual course of study.

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THIS little book contains the essentials of diseases of the thorax. The third edition has been considerably enlarged, and treats the subject in three divisions: first, an outline of the topography and landmarks of the thorax; second, a systematic consideration of the methods of physical diagnosis; third, a condensed statement of the sign met with in the various diseases. Designed especially to meet the immediate demands of the student, it has accomplished the author's purpose by the convenient, systematic manner in which the matter is arranged; it is also of value as a guide to the further study of current literature and clinical material.

ESSENTIALS OF PHYSICAL DIAGNOSIS OF THE THORAX. By ARTHUR M. CORWIN, A. M., M. D., Instructor in Physical Diagnosis in Rush Medical College; Attending Physician to the Central Free Dispensary, Department of Rhinology, Laryngology and Diseases of the Chest. Third Edition. Revised and Enlarged. Price, $1.25.

THE topics include the use of Chloroform and Ether; the use of Anesthetics in Childbirth; Anesthetics for Diagnostic and Therapeutic Purposes; Anesthetics in Surgery; Selection of the Anesthetic as governed by the nature of the Operation; Posture and Presentation of the Patient; Rules for Administration of Chloroform and Ether; Precautions Before and After; What to do in Cases of Accidents; Methods of Applying Local Anesthetics; the Use of Cocaine in Nose and Throat; in Genito-Urinary Surgery; Precautions for Cocaine Anesthesia; Infiltration Anesthesia and its Technique. The volume is nicely gotten up, and is certain to make many friends.

GENERAL AND LOCAL ANESTHESIA. By AIME PAUL HEINECK, M. D., Clinical Instructor in Genito-Urinary Diseases, College of Physicians and Surgeons, Chicago; Clinical Instructor in Gynecology, Chicago Clinical School; Clinical Instructor in Surgery, Northwestern University Woman's Medical College. 124 pages, $1.50. G. P. ENGELHARD & CO., Publishers, 358-362 Dearborn Street, Chicago.

HUGHES' COMPEND has so long been a favorite of students of medicine that it seems almost superfluous to say more of it than to mention that a new edition is out; its good repute is beyond anything that we can say, and is the best evidence that the book is worth having. For the sake of those who are not acquainted with the work, we would say that an amazing amount of information is to be found between its covers. Dr. Hughes has the happy faculty of condensation, his text is clear and concise, with no lack of detail, he covers the wide field of Practice, and does it thoroughly. Each subject is considered in its various aspects; synonyms, definitions, etiology, pathology, symptoms, diagnosis, prognosis and treatment being given. It would be difficult to say which is its strongest feature—the reviewer is especially impressed with the handling of treatment, it seems essentially practical. The chapters on Nervous and Skin Diseases are excellent.

HUGHES' COMPEND OF PRACTICE. A Compend of the Practice of Medicine. By DANIEL E. HUGHES, M. D., Chief Resident Physician, Philadelphia Hospital; Physician-in-Chief, Insane Department, Philadelphia Hospital; Late Demonstrator of Clinical Medicine in Jefferson Medical College, etc., etc. Sixth Physician's Edition, thoroughly revised and enlarged. 625 pages. Flexible leather, $2.25, net. P. BLAKISTON'S SON & CO., Publishers, Philadelphia. 1899.

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WRITERS for this special branch of medical literature have been very active during recent years, and we are provided with several excellent text-books, but there is always room for another, if the new one is a good one. The whole West is proud of the work that has been done by Lydston, and it goes without saying, a book from his pen is well worth having. Lydston's "heresies" are all the fruit of his experience, and merit a careful consideration. The subject-matter covers a complete consideration of diseases of the genito-urinary tract, 170 pages being devoted to diseases of the urethra and gonorrhea, 67 pages to chancroid and bubo and their complications, 183 pages to syphilis, 108 pages to the prostate and seminal vesicles. Diseases of the testis and cord, of the kidneys and ureters, and diseases affecting sexual physiology are each given their proportionate space, and the whole is most ably handled. The illustrations are numerous and excellent, each has a distinct mission, and is of material aid to an understanding of the text. T. A. H.

THE SURGICAL DISEASES OF THE GENITO-URINARY TRACT, VENEREAL AND SEXUAL DISEASES. A Text-book for Students and Practitioners. By G. FRANK LYDSTON, M. D., Professor of the Surgical Diseases of the Genito-Urinary Organs and Syphiology in the Medical Department of the State University of Illinois; Professor of Criminal Anthropology in the Kent College of Law; Surgeon-in-Chief of the Genito-Urinary Department of the West-Side Dispensary. Fellow of the Chicago Academy of Medicine; Fellow of the American Academy of Political and Social Science; Delegate from the United States to the International Congress for the Prevention of Syphilis and the Venereal Diseases, held at Brussels, Belgium, September 5, 1899, etc. Illustrated with 233 engravings. 6½x9¾ inches. Pages xvi-1024. Extra Cloth, $5.00 net. Sheep or Half-Russia, $6.75 net. The F. A. DAVIS CO., Publishers, 1914-16 Cherry Street, Philadelphia.

DR. BUTLER has demonstrated his right to a prominent place in literature as well as in medicine, his literary ventures, which have not been confined to the medical or the purely scientific, have invariably been of a high order, and have served not only to entertain, but also to instruct the reader. This volume occupies distinctly a higher plane than have previous publications of its nature. The subject is handled in a scientific manner, dealing as it does of necessity incidentally with baser forms of human passion, it is a pleasure to note that the animus of the work, as expressed in the preface, is clearly ethical, and should tend to awaken moral, rather than immoral, thoughts in the minds of those who peruse it thoughtfully. Medical investigators are realizing more and more the value of scientific works on this and on similar subjects. The day is past when it is considered immoral to recognize the existence of immorality, and it is also fortunately true that we are now expected to keep informed and to have opinions on all subjects having so intimate a bearing on man as do Love and its Affinities. This book should be widely read by the medical profession; it belongs to every medical library.

LOVE AND ITS AFFINITIES. By GEORGE F. BUTLER, M. D., Professor of Materia Medica and Clinical Medicine in the College of Physicians and Surgeons, Medical Department of the University of Illinois. Author of "Materia, Therapeutics and Pharmacology," etc. Beautiful octavo volume, cloth, gilt top, 134 pages, with photogravure frontispiece "Cupids Sharpening Their Arrows," by Raphael Mengs. G. P. ENGELHARD & CO., Publishers, Chicago.

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Favorite Prescriptions

Ophthalmia Neonatorium.—

℞ Protargol ..... gr. 20 to 60
Aqua..... ʒ i

M. Sig.: Put 6 to 8 drops between and unde the lids twice daily.

Facial Neuralgia.—

℞ Butyl chloral hydrat.....
Spt. vini rect.....aa ʒ iiss
Glycerini..... ʒ v
Aquæ, q. s. ad..... ʒ v

M. Sig.: A teaspoonful once or twice daily.—*J. A. M. A.*

Neuralgia Due to Impoverished Blood.—

℞ Tr. nux vomica..... ʒ ss
Fowler's solution..... ʒ ss
Syr. hypophospite (McArthur's)..... 1 bottle

M. Sig.: Teaspoonful at meals and bedtime. The arsenic should be pushed to the limit.

To Abort a Cold—

℞ Tincture of gelsemium..... 2 drops
Liquid extract of ergot..... 5 drops
Camphor water..... 4 drachms

Mix and take every hour immediately the cold is felt. If this is taken for twelve hours, the patient at the same time keeping indoors in the warmth, many a cold will be cut short.—*Woman's Med. Jour.*

Care of Hands.—In order to keep the hands smooth, Caspar recommends in the *Texas Medical Journal:*

℞ Ol. rosæ ..... gtt. xv
Glycerin ..... ʒ j
Spirit. myrciæ..... f ʒ iij
Ol. cajuputi ..... gtt. xx

M. Sig.: To be used on the hands every night before retiring, and before going out in the cold air in the morning.

Enuresis Nocturna.—

℞ Sidii benzoatis.....
Sodii salicyl.....aa gr. xx
Extr. belladonnæ..... gr. x
Aq. cinnamomi.....ad ʒ iv

M. S.: One teaspoonful every four or five hours. For a child four to six years old.

Or:

℞ Extr. rhois aromat. liq..... ʒ ij
Elix. simplicis..... ʒ ij
Aq. destill..... ʒ iss

M. S.: ʒi three times daily. For a child six years old.—FREYBERGER, *Med. Compend.*

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Original Department.

PAPERS for the Original department should be in hand one month in advance, and contributed to THE MEDICAL FORTNIGHTLY exclusively. A liberal number of extra copies will be furnished authors, and reprints may be obtained at reasonable rates, if request accompanies the manuscript. Engravings from photographs furnished free.

Contributions, and books for review, should be sent to the Editors, 312 Century Building, St. Louis.

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"Extradition" of the Blind.

BY J. WHITEFIELD SMITH, M. D.,

BLOOMINGTON, ILL.

Ex-Superintendent of the Illinois Asylum for Feeble-Minded Children. Lecturer on Physiology and Hygiene, Illinois Wesleyan University. Member of the Staff of Physicians and Surgeons Deaconess' Hospital.

Read before the Brainard District Medical Society, Jacksonville, Ill., January 25, 1900.

WITHOUT entering into the psychological phases of this subject any more than seems necessary to define terms, and state certain principles, let us view it in so far as possible from a purely physiological standpoint.

The Ego and non-Ego are *en rapport* by means of a nervous communication.

The material universe is made known to the mind through the senses.

"Sense-perception is the power to gain a knowledge of material objects through the sensorium."—Porter.

"Sense-perception is the power to gain a knowledge of things affecting us, external to ourselves and extended."—McCosh.

"We live in a wonder-world. Beneath us, around us, above us, are the earth and the heavens with their varied tenantry. From this outer-world come to us, vibrating through the sensor lines, marvelous messages, light flashes along the optic lines. and I behold a world of color, form and beauty. Sound-waves vibrate through the auditory line, and I live in a world of speech and song. Flavor and odor waves come to me, and I live in a world of grateful food and sweet odors. Touch moves his magic wand, and I am gratified by balmy breezes. Endowed with sense perception, I stand face to face with the outer world"—Baldwin.

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It is stated that ninety per cent of our sense-perception comes to us through sight. If the vision is abrogated, the other special senses become more acute, and seem to compensate to a remarkable degree for this loss. The following cases present an interesting phenomena:

Mr. W., American, occupation, lawyer; aged seventy-three, became suddenly blind in both eyes, during the month of February, 1898. One eye became blind about two weeks in advance of the other.

The blindness was due to embolism of the central artery of the retina.

I was consulted by Dr. Dunlap in regard to this case, in March, about one month after the total blindness had occurred. The patient had not the faintest perception of light, and yet possessed the ability to locate external objects (trees) with remarkable accuracy.

I have observed him while walking along the street, thrust out his cane and touch the trunks of the trees along the walk in regular succession, as he would pass by them.

I have also joined him in a walk, and while we were engaged in a conversation, he would reach forth and strike the trees with his cane as we would pass by, automatically, or apparently without any effort whatever to locate them. I do not remember of ever seeing him make a false projection in the direction of a tree, or make a mistake in an attempt to locate one. The size of the tree apparently had nothing to do with its location, as he would locate the small ones as readily as the larger ones.

When asked if he knew that a tree was near by, he would answer that he did, but could not explain how he perceived it.

This ability, however, disappeared in about nine or ten months after the loss of his vision.

In a personal communication from Dr. Geo. E. DeSchweinitz, he states the following:

"I have seen a patient who is stated to have the same power—a boy blind from double optic nerve atrophy following choked disc the result of brain tumor. This peculiar power of knowing when he was in the presence of a tree, although he had not the faintest light perception, lasted only a short time. I always supposed that in his case a certain acute familiarity with his surroundings led him to guess the probable position of the trees, and that he deceived himself into the belief that he saw it. I think it is possible that in some of these instances the other special senses became so acutely developed that blind patients are enabled to act in this astonishing manner, almost as if they have their sight."

Mr. W. Hanks Levy, the blind author of 'Blindness and the Blind' (London), gives the following account of his powers of perception:

"Whether within the house or the open air, whether walking or standing still, I can tell, although quite blind, when I am opposite an object, and can perceive whether it be tall or short, slender or bulky. I can also detect whether it be a solitary object or a continuous fence; whether it be a close fence or composed of open rails; and often whether it be a wooden fence, a brick or stone wall, or a quick-set hedge.

I cannot usually perceive objects if much lower than my shoulder, but sometimes very low objects can be detected. This may depend on the

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nature of the objects, or on some abnormal state of the atmosphere. The currents of air can have nothing to do with this power, as the state of the wind does not directly effect it; the sense of hearing has nothing to do with it, as when snow lies thickly on the ground objects are more distinct, although the footfall cannot be heard. I seem to perceive objects through the skin of my face, and to have the impression immediately transmitted to the brain. The only part of my body possessing this power is my face; this I have ascertained by suitable experiments. Stopping my ears does not interfere with it, but covering my face with a thick veil destroys it altogether. None of the five senses have anything to do with the existence of this power, and the circumstances above named induce me to call this unrecognized sense by the name of 'facial perception.' When passing along the street I can distinguish shops from private houses, and even point out the doors and windows, etc., and this whether the doors be shut or open. When a window consists of one entire sheet of glass, it is more difficult to discover than one composed of a number of small panes. From this it would appear that glass is a bad conductor of sensation, or at any rate of the sensation especially connected with this sense. When objects below the face are perceived, the sensation seems to come in an oblique line from the object to the upper part of the face. While walking with a friend in Forest Lane, Stratford, I said, pointing to a fence which separated the road from a field: 'Those rails are not quite as high as my shoulder.' He looked at them and said they were higher. We, however measured, and found them about three inches lower than my shoulder. At the time of making this observation I was about four feet from the rails. Certainly, in this instance facial perception was more accurate than sight. When the lower part of a fence is brickwork, and the upper part rails, the fact can be detected, and the line where the two meet easily perceived. Irregularities in height, and projections and indentations in walls, can also be discovered." —James' Psychology.

Mr. Alfred Hirst, blind of optic nerve atrophy for a period of twenty-two years, gives the following:

"Curiously enough during all of my twenty-two years of blindness I have never had anything approaching to a serious accident. I had many before I lost my sight. Nor have I during this long period broken a shilling's worth of crockery or glassware. If I enter a room I can by a sort of instinct, which I cannot understand or explain, tell whether any person is in the room. And if I am walking along a quiet street or country road, I can easily perceive from the sound of my feet when I am approaching a lamp-post or an opening in a wall. It is not difficult either to detect whether the road is bounded by a hedge or a wall. Of course it is very easy to tell when one is passing under or near to trees."—*The Living Age.*

By "Extradition," "Eccentric projection" or Eccentric perception" of sensation, is meant "The projection in the act of perception, of a sensation to a distance from the body." This also, is sometimes called "Extrensic reference of our sensations."

There seems to be a strong mental inclination to refer certain states of feeling to causes outside of our bodies, whether connected with them or

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separated from them by space. There is a great difference of opinion in regard to this matter. Some psychologists hold that we give an externality and a direction to our bodily sensations, while others urge with equal ardor that this view is untenable.

Be this as it may, it is not our province to decide. These psycho-medical features may be stated:

The surgeon, in probing a gun-shot wound locates the ball at the end of the extended probe—*seems* to feel the ball in a definite location.

The gynecologist by the use of the sound and the educated touch (*Tactus eruditus*) explores the uterine cavity and locates the tumor—*seems* to feel the tumor remotely from his finger tips.

The physician in the act of palpation and percussion, examines the chest and determines the condition of the heart and lungs without mediate contact of these organs—and locates lesions in them.

In all of these cases the impressions have been transmitted by or through a solid body from the object to the tactile sensibilities of the hand, viz.: The probe, the sound and the chest wall. In the perception of the objects (trees) by the blind above mentioned, I presume there can be no doubt but that the surrounding atmosphere is the medium through which the impressions are transmitted (from the object) or translocated (to the object.)

The atmosphere is the medium for many interesting and also some inexplicable phenonena.

In visual perception the air is the medium conveying the light waves from the object to the retina.

In Audition the air is the transmitter of the sound waves, and also the odor waves are borne on the wings of air.

In like manner through the medium of the atmosphere we feel the heat from the sun.

The awareness of the presence and position of an external object, and also of its absence, is illustrated in the pressure of the atmosphere on the tympanum.

"The tympanic membrane is furthermore able to render sensible difference in the presence of external atmosphere, too slight to be felt either as noise or in this more violent way. If the reader will sit with closed eyes and let a friend approximate some solid object, like a large book, noiselessly to his face, he will immediately become aware of the object's presence and position—likewise of its departure. A friend of the writer, making the experiment for the first time, discriminated unhesitatingly between the three degrees of solidity of a board, a lattice frame, and a sieve, held close to his ear. Now as this sensation is never used by ordinary persons as a means of perception, we may fairly assume that its felt quality, in those whose attention is called to it for the first time, belongs to it *qua* sensation, and owes nothing to educational suggestions. But this felt quality is most distinctly and unmistakably one of vague spatial vastness in three dimensions—quite as much so as is the felt quality of the retinal sensation when we lie on our back and fill the entire field of vision with the empty blue sky. When an object is brought near the ear we immediately feel shut in, con-

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tracted: When the object is removed, we suddenly feel as if a transparency, clearness, openness, had been made outside of us. And the feeling will, by any one who will take the pains to observe it, be acknowledged to involve the third dimension in a vague unmeasured state.

"That the sensation in question is one of tactile rather than of acoustic sensibility would seem proved by the fact that a medical friend of the writer, both of whose *membranæ tympani* are quite normal, but one of whose ears is almost totally deaf, feels the presence and withdrawal of objects as well at one ear as at the other"—James' Psychology.

Our subject necessarily lies on the border of three branches of science —Physics, Physiology and Psychology.

In acts of perception of external objects, all of the waves, vibrations, changes—all of the means of excitation—taking place *between* the object and the organs of special sense, located at the periphery of the body are subject to the laws of philosophy.

The transmission of the impressions, through the sensor lines, *from* the organs of special sense *to* the psychic centers in the brain, are questions properly falling within the limits of physiology.

The co-ordination of the impressions, and the resolving of them into consciousness, belongs to the domain of psychology.

Physical excitations come bounding in upon the delicate structure of the nervous system at all times. The organs of special sense receive them and transmit them to the cerebral ganglia for interpretation. When the body is in possession of all of its organs, and these are in normal condition the excitation from the material universe is perceived—not in its entirety—but to a large extent, and we are enabled to establish standards of comparison, which are practically uniform. If one or more of the means of knowledge is eliminated, as the eyes in the case of the blind, the sum of our perceptions up to this standard is no longer complete.

There is a natural limitation in the functions of all the organs of special sense, whereas the excitations from without are more definite, and uniform. For instance, with normal eyes of good visual perception, we look into a glass of clear water and are unable to perceive the animalculæ with which it is teeming. By the aid of the microscope these are perceived. The waves of excitation from them, is the same whether we look through the lens or not. When they are properly focused the retina takes cognizance of them, otherwise they do not effect it in the act of perception.

The same thing is true of the ear. Many sound waves are inaudible, not because they do not reach the ear, and perhaps affect it in some way, but because their waves of excitation are too feeble to enter into the specialization of its function.

May we not say then that many waves of excitation fall upon the optic nerve, auditory nerve, and olfactory nerve, etc., and though they make no impression on the special functions of these organs, yet influence the mind in some way?

Under certain pathological conditions may not the specialized functions of the organs of special sense be suspended or entirely abrogated (as seeing, hearing, smelling, etc.), and still the nervous apparatus of these

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organs be impressed by physical excitation and transmit these impressions (not as visual, auditory or olfactory) so that they influence the mind ?

In the cases reported, blindness was due in the first: to embolism of the central artery of the retina. In the second: double nerve atrophy, following choked disc the result of brain tumor. In the fourth: To optic nerve atrophy. (I do not know the cause of blindness in the third case.)

In all of these cases light waves could flood the eye and be impingned upon the retina, the same as before they were blind; the pictures of objects, so to speak, were focused on the retina, but the normal circuit of conductivity of light waves (as such) was broken, due to lesions, broadly speaking, in the optic nerves.

In the first case the loss of vision was sudden; although it takes some weeks, even months for the retina to atrophy.

Could it be possible, during this time, that a residuum, at least, of light-waves may have been transmitted, though imperfectly, and not sufficiently or forcibly to the visual center to produce vision, yet to such a degree, as to assist in influencing the mind in determining the *presence* of the trees ?

The ability to determine the presence of trees in this cases only lasted nine or ten months. Perhaps the sensibility and the conductivity of the retina were entirely suspended by this time, and the organ wholly atrophied (?).

In the second case, the power of knowing when he was in the presence of a tree lasted only a short time.

In optic atrophy the loss of vision is usually gradual, varying from a depreciation of sight to that of blindness. During this time the disease process progresses; and by the time blindness supervenes the conductivity in the retina and the optic nerve is perhaps almost entirely suspended, light-waves no longer could be transmitted in the perception of objects of vision, though may they not be imperfectly transmitted and translated in a vague and indefinite way, assisting the mind in feeling the presence of the tree (?).

That retinal impressions *per se* affect us, might be inferred from the following:

"We have seen in a previous section that the frog and the bird certainly, and according to some observers also the rabbit, are in the absence of the cerebral hemisperes not totally blind, since their movements appear to be guided by retinal impressions; and cases are recorded of the dog being obviously still guided in some measure by retinal impressions after the occipital lobes and indeed the greater part of the brain had been removed." —Foster's Physiology.

To take a more comprehensive view of this matter, it is obvious that other factors enter into the causes, by which the cases cited are enabled to locate external objects.

The impressions which come to us in great profusion, are specialized by organs adapted for that purpose.

The waves of excitation coming from an object, a tree for example, may be reflections of many kinds of vibration, and give rise to as many different

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kinds of impulses. They also differ in intensity and character, and have a different localization. Thus we may have light-waves, color-waves, heat-waves, sound-waves, odor-waves, etc., all coming from the same source. The special sense organs transmit these, as they are adapted, to the brain, and the mind translates them as sight, color, heat, sound, odor, etc., and *seems* to refer them to the source from which they came. These in turn are not simple sensations; they are all complex in character, and consist of many elements, which are co-ordinated in our own consciousness into a whole.

Again, the correlation of our senses have a great deal to do in determining external objects. I think we may say that the sensation arising from retinal impressions is not the only way that the mind is influenced in the perception of a tree; but also by psychical actions which depend on our past experiences and knowledge in regard to trees, which we have learned by touch, as well as sight, and in many other ways.

All our sensations may be regarded as modifications of the sense of touch. Perhaps touch is the first distinctly differentiated sensation.

In the evolution of sensor organs, some of the cells are more highly differentiated, and in the development are so modified that they are more easily excited by vibrations of one kind than another.

In perception the mind must be *touched* in a sense by the object it perceives.

This is accomplished by nervous communication through sensory end-organs (peripheral).

Touch is the primary sensibility.

Touch is one of the spatial senses.

There is a "field of touch" as there is a "field of vision." In the absence of the latter, no doubt the former is brought more prominently into general use. The localizing power of the skin varies in its different areas.

The following table shows the shortest distance between two points of excitation on the skin, that can be distinguished as two by the sense of touch:

Tongue-tip	1.1 mm.	(.04 inch)
Palm side of last phalanx of finger.	2.2 mm.	(.08 inch)
Red part of lips	4.4 mm.	(.16 inch)
Tip of nose	6.6 mm.	(.24 inch)
Back of second phalanx of finger	11.0 mm.	(.44 inch)
Heel	22.0 mm.	(.88 inch)
Back of hand	30.8 mm.	(1.23 inches)
Forearm	39.6 mm.	(1.58 inches)
Sternum	44.0 mm.	(1.76 inches)
Back of neck	52.8 mm.	(2.11 inches)
Middle of back	66.0 mm.	(2.64 inches)

—MARTIN.

From the table we observe that the finest discriminations are made by the tip of the tongue and the tips of the fingers. This perhaps is in accordance with the general law, that mobile organs most readily and carefully

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delimit objects. The special education and training of these organs in their work has a great deal to do in developing their sensitiveness.

Applying this to our third case reported, in which it is said, "I seem to perceive objects through the skin of my face, aad to have the impressions immediately transmitted to the brain," would lead us to think, if this view is correct, that this sensibility was more prominently developed in the lips, lids, brows and forehead. The lips are very mobile, and as shown above, have an exquisite degree of sensibility to impressions. The lids are in almost constant motion, and the skin covering them is about the thinnest found on the body. The brows and skin of the forehead execute many movements in the various facial expressions.

In our deductions, we must accredit a great deal to education and training of the senses of the blind; and furthermore, distinguish between congenital blindness and the loss of vision in those that have at some time had the normal use of their eyes.

Ordinarily, with the full possession of all our senses, we employ the one that is best suited to give us the quickest result in questions of spatial relations, and the eye is thus employed. In the absence of this organ, we have to rely on the sensibility of touch, assisted in part by the other senses and by our past experiences in relation to the material universe.

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Spastic Hemiplegia, Flaccid Paraplegia and Spastic Paraplegia.

BY CHARLES GILBERT CHADDOCK, M. D.,

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Clinical lecture delivered at the St. Louis City Hospital, November 6, 1899.

THE three cases before you present certain marked symptoms referable to the nervous system, which we shall be able to compare and contrast, and thus illustrate the diagnostic principles and various objective signs upon which the physician must largely depend for his diagnosis of the seat and nature of the nervous lesion.

When this patient attempts to move his left upper or lower extremity, both of which are in a state of semi-flexion, you note that he has no voluntary control over them, but he moves his right limbs normally. You also note a great difference between the aspect of the two sides of the face. The movements made when he answers a question show that voluntary action of the right half of the face is marked and seemingly even exaggerated when the movements are compared with those of the left side. This superficial examination suffices to show that the patient is suffering with a lack of power distributed over the right half of the body, and in medical language is affected with left *hemiplegia*.

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Turning now to the second patient, you note when he attempts to move his lower extremities, the only movement of which he is capable is a slight flexion and extension of the left toes; contrasting with this, he has apparently full control of his upper extremities, and there is no marked evidence of disturbance of the aspect or movements of the face. In medical language, this patient is suffering with that form of paralysis known as *paraplegia*. You will remark, however, in contrast with the patient suffering with hemiplegia, that the lower extremities are extended and show no predominance of contraction in any group of muscles; and if we compare the manner in which the paralyzed members in these two cases act when moved passively, there is a marked difference. In the case of hemiplegia, the extremities are stiff, and do not yield with any readiness to an effort to move them, whereas, in this case of paraplegia, the limbs can be moved about without encountering other resistance than that offered by their weight. Thus these are two forms of paralysis, differing in their distribution, as well as in their nature. In the case of hemiplegia there is a spastic or stiff condition, owing to a more or less rigid contraction present in all the paralyzed parts. In the case of paraplegia the muscles are in a relaxed condition, rendering the limb limp or flaccid, and the cases illustrate those two general kinds of paralysis known as *spastic* and *flaccid*.

The third case may be contrasted with the second case of paraplegia. Again, the patient has complete control of the upper extremities and face, but a difficulty in movement of the lower extremities. Here, the affected lower limbs offer passive resistance which reminds us somewhat of the resistance encountered in the first case of hemiplegia. The distribution of the loss of power in this case is again that of paraplegia, but the stiffness and rigidity of the limbs classifies it as spastic paraplegia.

The symptomatic diagnosis of these three cases is respectively—spastic hemiplegia, flaccid paraplegia and spastic paraplegia. This, however, is merely a description of the distribution of the paralysis, and in nowise enlightens us concerning the seat and nature of the lesion. We must look further for such signs as will indicate the seat of trouble.

In the time at our disposal today, we cannot profitably examine more than one of these cases, and we may best confine our attention to this case hemiplegia, reserving the other cases for subsequent thorough discussion.

There are certain signs that can be brought out in cases of spastic paralysis, which, taken together, are of prime importance in distinguishing between so-called functional paralysis and paralysis due to organic lesion of the nervous system. First in importance is the condition of the deep or tendon-reflexes. On tapping the patellar tendon with the percussion hammer, there is a quick extension of the leg upon the thigh, and compared with the opposite side it seems exaggerated; but you will note that the excursion of the leg is less than on the unaffected side. This is due to the general contracture of muscles already noted; the stiffness of the muscles renders less evident the exaggeration of the reflex extension of the leg. This is to be kept in mind in such a case as possibly masking a true exaggeration of the deep reflexes. When the tendo-Achilles is tapped a similar condition is manifest, but here again the excursion of the foot in plaular ex-

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tension is prevented by the contracted state of the muscles. In a case of this kind where a true exaggeration of deep reflexes is disguised by a general state of contracture of the muscles of the limb, there is very frequently present another phenomenon which enables us to decide the question of exaggerated reflexes; namely, foot-clonus. It is important to look for this sign, especially if there be exaggeration of the knee-jerk on both sides, because increase of knee-jerk on both sides may be functional. When the sole of the foot is pressed upward in forced dorsal flexion, immediately there is a rythmical alternate flexion and extension of the foot on the leg maintained for some seconds while pressure against the sole of the foot is made. This is an illustration of true foot-clonus, called also the foot-phenomenon, and by French writers often spoken of as spinal epilepsy. This phenomenon is never present in health, and is always indicative of organic disease in the brain or cord, but it is not always present, even when there is exaggeration of the knee-jerk due to organic disease. Thus its presence is decisive; its absence is equivocal. There is evidently, then, a general state of exaggerated deep reflexes in the left lower extremity.

Turning now to the left upper extremity, we may examine certain deep reflexes about the hand and arm. As the flexor tendons at the wrist are tapped, you note a quick flexion of the fingers, and a tap on the head of the radius gives rise also to a sudden movement of the forearm. Likewise when the tendon of the triceps is struck back of the elbow, there is a sudden movement of the arm in extension. You remark, however, that here, as in the lower extremity, the extent of the reflex movements is diminished by the general state of contracture; but by comparison with the reflex movements of the right arm, you see that, although hindered by muscular contracture, they are more marked and therefore exaggerated. We find, then, a general state of reflexes in the upper extremity in accord with that present in the lower extremity.

Is there any corresponding deep reflex about the face that enables us to determine whether the condition of the face is, in the sense of reflexes, in a state like that found in the limbs? Upon asking the patient to open his mouth, and pressing down upon the lower incisors with the handle of the percussion hammer, with each light tap given to the handle, there is a sudden movement of the jaw upwards. This is called the jaw-jerk, and were you to compare the movement in this case with that ordinarily produced in normal persons, you would at once recognize that it is more easily induced, and that the movement is greater in extent. We are, therefore, justified in concluding that the jaw-jerk in this case is exaggerated.

The whole left half of the body is evidently in a similar state; that is to say, there is a general exaggeration of the deep reflexes with general contracture of the muscles. You say at once, however, that the muscular contraction, so marked in the extremities, is not found in the facial muscles of the left side, that, on the contrary, the lines of the right side of the face are more marked, and the mouth is drawn to that side. The left facial muscles being paralyzed, and those of the right side of the face being of normal tone, the latter draw the features toward that side. This peculiarity of deviation, in which the mouth and nose are slightly drawn toward

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the unparalyzed side, in the common feature of unilateral facial paralysis at an early stage of the affection; but sooner or later in many cases there is a secondary state of contracture developed in the muscles of the paralyzed side, with a consequent reversal of the condition seen in this case. The contracture found in the limbs, if it come on in the face, develops later; and the ordinary rule that the features are drawn towards the sound side, may be reversed, and the features drawn towards the paralyzed side. It is necessary to remember this peculiarity, for you might make an error on superficial examination as to which side of the face is paralyzed. Before secondary contracture, the features are distorted towards the sound side.

You will note, as the patient is asked to move his brow, and as he speaks, that there is a difference in his voluntary control of the upper and lower parts of the face. He is able, you see, to wrinkle the brow and to close the eye on the paralyzed side; but you notice that the left corner of the mouth is lower than the right. The inequality of distribution of the palsy is characteristic of facial paralysis in cerebral hemiplegia. This difference is so marked that we are told that in cerebral hemiplegia the upper facial domain is not involved. This statement is borne out by the present condition of our patient, as you see, but it is not literally true. Were you to examine a case of hemiplegia immediately after its onset, you would discover weakness in the upper facial, as well as in the lower facial domain, though less pronounced in the former. The probable explanation of the initial paralysis and subsequent recovery, as compared with the persistent paralysis of the lower part of the face is, that the innervation of the upper facial is double—that is to say, from both hemispheres of the brain, and that the uninjured hemisphere gradually assumes control.

Upon asking the patient to protrude his tongue, you note at once that it deviates to the left side. Is this a true deviation of the tongue to the left, and not brought about artificially by a direction given to it by the lips as it passes out of the mouth? In some cases deviation of the tongue as it is protruded, is due to deformity of the mouth and not to defect in the movements of the tongue itself. In such cases as this, this possible source of error must be excluded by care in noting that the direction of the tongue is not interfered with by the lips. You note that the deviation is to the left, or toward the paralyzed side, and is due to defective movement of the tongue itself. When the two halves of the tongue act equally, the tongue is protruded in a straight line; if one side is weak the normal balance between the two sides is disturbed, and the active side pushes the tongue over toward the weak side, in the effort of protrusion. In this case, you see that the deviation of the tongue is to the left, showing that the left side of the tongue is weak. If now we ask the patient to open his mouth and retract the tongue, you notice that it is turned toward the right side; in other words, the right side of the tongue being normal in activity, as it draws the tongue backward it causes it to deviate toward the right side, for the same reason that it deviates to the left side in protrusion. Sometimes a difference between the two sides of the tongue is more easily detected by examining the tonge as it lies in the mouth, remembering always that the

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deviation of the tongue while lying in the mouth is toward the sound side, in case one side is paralyzed.

Sometimes a patient with hemiplegia, especially of the right side, is too dull mentally to obey the command to put out the tongue, and you might conclude that the tongue were quite paralyzed on both side. In such a case the actual state of the tongue may be determined by pushing it about the mouth with the finger. For the resistance encountered, and the movement thus excited, will allow you to form a judgment of the condition of the muscles.

This superficial examination, then, shows a condition of paralysis involving the whole left side of the body, with a tendency to secondary contracture, and with an exaggeration of reflexes.

I wish to call your attention to an additional phenomenon that is usually found in paralysis of this nature. I refer to the so-called toe phenomenon. Your text-books tell you that upon irritating the sole of the foot the reflex movement excited is one of flexion (dorsal) of the foot on the leg, of the leg on the thigh, and of the thigh on the trunk, and that the toes are flexed or extended indifferently. The reflex movement, however, is not always so extensive as this, and it may be confined to a movement of the foot and toes. Something more than two years ago, Dr. Babinski called particular attention to the movements of the toes when the sole of the foot is irritated. He was the first to observe that the reflex movement of the toes, when distinct, was invariably flexion and not extension, save in particular cases. His investigations have amply demonstrated that extension of the toes has a pathological significance, and as this phenomenon, known as Babinski's sign, will be found of use in diagnosis, it is worth our while to thoroughly understand it.

Before explaining its pathological significance or diagnostic value, it is best first to demonstrate the reflex movement and its variations.

In the hemiglegic patient, when the sole of the sound side is irritated by this dull painted instrument, you remark the decided flexion of the great toe, and also of the others, with slighter movements of the limb in general; irritating now in the same way the left and paralyzed side, you see at once that the toes are extended, especially the great toe, though the movemont is not so great nor so rapid. This extension, very noticeable in comparison with the flexion on the sound side, is an example of Babinski's sign. When next the soles in the case of flaccid paraplegia are similarly irritated, you note that there is no response, neither in the sense of flexion nor extension. But, in the third case, one of spastic paraplegia, you see that there is very sudden, prolonged, and extreme extension of the great toes on both sides—a perfect example of the phenomenon.

These examples are enough to explain what we mean by Babinski's sign, and we may now consider its relation to the other objective signs found in the cases under consideration.

We have noticed its presence in the two cases where spastic symptoms predominate, and its absence in the case of flaccid paraplegia; from which it may be infered that it is to be expected in paralysis of a spastic type. Such is the fact. Babinski's sign is only found in cases of disease or dis-

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turbance in the central motor neuron; that is, in the pyramidal tract, at any point from the cerebral cortex to the termination of the axis—cylinders of the cortical motor cells in the anterior horns of the spinal cord. Up to the present time, and in several hundred cases carefully observed, this sign has never been found except as an accompaniment of disturbance in the motor tract as indicated. It has never been seen in functional disease, and never in disease of the peripheral nerves. Thus, its presence has a decisive value in diagnosis, as certainly indicating disturbance in the pyramidal motor fibres. Its absence, of course, has not the same value in an opposite sense; nor at the present moment is it possible to say that flexion of the great toe, with other signs of involvement of the motor tract of the cord, has any special meaning; but it may be said, with all assurance, that in absence of both flxion and extension, which is often encountered, we must interpret the other signs present in the usual sense. As you have already noted, the distinctness of Babinski's sign is not in relation to the apparent severity of the lesion; for in this very severe case of hemiplegia it is less marked than in the case of spastic paraplegia, where the patient has some voluntary power over his lower limbs. The great value of this sign is, that it is often possible to discover it when other signs of disease of the pyramidal tract are not yet present, or when they are equivocal. As already noted, exaggeration of the knee-jerk does not always indicate organic disease, and foot-clonus is very variable, even in organic cases, and often equivocal, unless decidedly pronounced. You know that in hysteria there is frequently a so-called false foot-clonus, and you can readily see how in a given case of this nature the sign of Babinski would decide the question of diagnosis; how even, its absence might have weight in leading to a conclusion.

The importance of this sign, as was pointed out by Babinski, is still further increased by the fact that in the early stages of organic hemiplegia, exaggeration of the tendon reflexes is often wanting, and this sign is frequently present at such a stage; and in such a case its presence would be decisive, for it has never, as has been said, been found in functional or hysterical paralysis.

It must be added, however, that there are two known conditions, aside from organic disease of the pyramidal tract, in which Babinski's sign may be found. It is present in new-born infants, where it is doubtless dependent on the undeveloped state of the pyramidal motor tract; it has also been found in cases where the system was under the influence of strychnine. It does not necessarily indicate incurable changes in the motor tract, rather disturbance; for it has been found in a case of cortical irritation producing Jacksonian epilepsy cured by operation. Other details might be added concerning some curious variations of this reflex, but for the present it will suffice to say, that ordinarily the irritation of the sole should be quite decided, and applied at the external half or border of the sole to most readily excite the phenomenon.

We have then in this case of left spastic hemiplegia, all the signs of organic disease of the central motor tract, and it remains to determine at what point or points the trouble lies.

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In central nervous disease, we try to explain symptoms by a single lesion, and invoke double or multiple lesions only when forced to do so by disparate symptoms. As you know, hemiplegia is quite characteristic of cerebral lesion; for a single lesion of the motor tract in the cerebrum is capable of producing at once a complete paralysis of the whole opposite half of the body. In this case, a single lesion, to produce the complete hemiplegia, must be located above the highest point of decussation of the motor fibres, hence above the pons, and above the crus, and, therefore, at some point in the right cerebrum. A single small lesion of the internal capsule would readily involve all the fibres here seen to be damaged; a single very extensive lesion involving all the motor cortex might produce the same symptoms. It remains to determine whether it be the cortex or the capsule that it involved.

The history tells us that the paralysis was instantly produced with an attack of unconsciousness, a good reason in itself for regarding the cause as a single lesion affecting the right cerebral hemisphere. Sudden apoplectic attacks of organic cause are due to rupture, embolism, or thrombosis of cerebral vessels. Rupture is due commonly to changes in the walls of vessels causing small aneurisms, and these rarely occur before middle life; embolism is usually an accident in the course of valvular disease of the heart, and may occur at any age; thrombosis is usually the result of disease of vessel walls, whether it be the atheroma of advanced years or an arteritis due to infection. Syphilis is by far the commonest cause of arteritis from infection, and should always be considered as a possible factor in apoplexy with organic symptoms. If we bring these points into consideration, we exclude embolism, since in this case the heart is sound, whereas his age makes it necessary to consider both rupture and thrombosis. But there is a clear history of syphilis, the frequent cause of arteritis, and it seems more probable that this is the factor in play; for the patient has not yet reached the age when hemorrhage is frequent. If then the probabilities point to thrombosis due to syphilitic arteritis, there must have been thrombosis of the vessels supplying the whole of the cortical motor area of the right hemisphere, or thrombosis of the vessels supplying the motor portion of the internal capsule. To produce the symptoms present by cortical lesion, complete obstruction of the right sylvian artery would be necessary. But complete obstruction of the right sylvian artery would cause additional symptoms; namely, symptoms referable to higher sensory centers in the temporal and parietal lobe; these are wanting, and we are forced to conclude that the thrombosis (or hemorrhage) was seated in arteries supplying the internal capsule, and that it occasioned a complete destruction of the motor tract there.

In conclusion, it may be added that the severity of the paralysis, and the intensity of the secondary contracture, are also in favor of softening from thrombosis, since the symptoms due to softening from loss of blood supply are more marked, as time goes on, while the initial symptoms due to hemorrhage always grow less marked with the progress of time. There is no time to consider the case further than to repeat our diagnosis of thrombotic softening of the right internal capsule, due to syphilitic arteritis.

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PHYSIOLOGY.

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CHAPTER XXXVI.—GENERAL REVIEW OF THE SENSES.

The well-defined senses may be classified as follows, generally distributed senses being in capitals, special senses in Roman lower-case:

Sight, Hearing, TEMPERATURE,	due to stimulation by vibrations.
Smell, Taste,	due to chemic stimulations.
TOUCH, PRESSURE, MUSCULAR SENSE, Equiblibrium,	due to mechanic stimulations.

The sensations connected with the various appetites, sexual, hunger, thirst, need of oxygen, as well as the occasional appetites for particular foods, such as salt, may be considered as rudimentary senses, whose end-organs are situated, respectively, in the sexual organs, stomach and intestine and lungs. Excepting a comparatively few instances in which the axis cylinders of nerves break up into fine tendrils from which sensations are carried, the sensory end-organs consist of some modification of epithelial cells through which an impulse is given to the nerve fibre. After traveling through two or more heurons, the sensory impulse ends in the cerebral cortical cells which are, themselves, derived from epithelium. Thus the embryonic epiblast which develops cells to protect the body from the external world, also develops the cells by which the body takes cognizance of that world. The beginning of the evolution of a special sense is illustrated whenever similar stimuli, directed against different parts of the surface, produce different central perceptions. Thus, the finger-tips, which are used for obtaining delicate sensations of pressure and touch, lose their sensitiveness to heat and cold, while the forehead, back of the hand, middle of the chest, abdomen, etc., are very sensitive to heat and cold, and afford little information of form and consistence. Irritation of nerve-trunks, as by section, applying ice where they are superficial, etc., and contact of objects with parts of the body supplied with fibrillar division of nerve-fibres instead of end-organs—as the conjunctivæ—cause pain, only. Excessive stimulation of the generally distributed senses of touch, pressure and temperature, causes pain, indistinguishable, according to the kind of stimulus. Pain is not subject to differences of degree, except within narrow limits, and except as duration or mental effect increases or diminishes its appreciation. Stimuli, ordinarily painful, which involve a large measure of shock, such as sudden, extensive injuries, immense burns, diffuse peritoneal in-

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flammations, etc., may be free from pain. Excessive stimuli of the special senses, produce disagreeable sensations of the same kind, but no actual pain. Disturbance of the organ of equilibrium produces dizziness, with probably reflex nausea and faintness. Excessive stimulation of the muscular sense produces fatigue and inability to coördinate.

Early in life, most perceptions are due to the use of the generally distributed senses of touch, pressure and muscular sense, as well as temperature, babies apparently receiving only vague sensations of sight, hearing, etc. Dogs and other lower mammals seem to derive their most intellectual perceptions from smell, moderately civilized human beings derive their most intellectual perceptions from the use of the ear, highly civilized communities and individuals rely more and more on the expression of ideas by printing, writing, etc., which appeal to the eye. With the deprivation of one or more senses, the others tend to develop more acutely, but recent studies show that the compensation is not automatic, but due to the heightened incentive, and that a person with all his faculties may develop his smell and touch as acutely as a blind man, if he will take the pains.

The sense of equilibrium deals with movements and directions, that is with the relations of body to space. The muscular sense is a registration of efferent impulses to muscles, and deals only indirectly with objects, but rather with forces, such as gravity, most of our ideas of weight being derived from the muscular sense. The other senses deal with objects. Temperature, taste and touch require actual contact, except that temperature nerves may be excited by the radiation of heat from a body, though, for practical purposes, only to a slight distance. Smell, though depending on the presence of volatile particles in the nostril, is practically used to detect objects at some distance. Sight and hearing also deal with objects removed from the body.

Although smell is an important intellectual sense for the lower animals, and is connected with a special cerebral lobe, the olfactory, the entire olfactory apparatus has degenerated in man. No other sense becomes so easily fatigued nor, in any other, is absolute rest necessary for restoration of function. While we may ignore impressions of sight, sound and touch that may have become monotonous, an effort of the will is all that is necessary to restore conscious perceptions of them. After the nerves of smell have carried the same impressions for some time, not only do we become indifferent to the odor, but it is necessary to breathe air entirely free from it, before we can again distinguish the odor in question.

Through the different senses various ideas are obtained. Those from the muscular sense are the most difficult to express. As we have no consciousness of the anatomic boundaries of the different muscles, training of the muscular sense affords only a general idea of the celerity and force to be used in making particular motions, and the special idea of weight. While by practice, quite accurate estimations of weight are possible, the idea contained is, in a sense, relative, it being impossible to distinguish differences of less than 3 per cent between two contrasted bodies. Thus, if an object weighs less than 3 per cent of the weight of the empty hand and fore-arm, we cannot estimate its weight at all, except to assign an approxi-

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mate maximum. More or less pressure or muscular sense is involved in the use of the tactile sense proper, since we can derive no idea of contour or density, except by pressing some sensitive part, commonly the finger-tips, against the object. For this reason, the writer believes that there is no such thing as a separate pressure sense, and that the so-called pressure sense is either the muscular or, in parts of the body devoid of muscles, like the finger-tips, the tactile sense employed with a rather excessive contact-pressure. The principal ideas of touch, not including temperature and excluding the ideas of hardness and softness derived from the so-called pressure sense, are concerned with form. The principal ideas derived from the sense of sight deal with form and color. Thus the large number of words dealing with form, such as square, straight, corrugated, etc., are equally applicable to perceptions of touch and sight.

The temperature sense is also purely relative, and is active only between O and 50 C. Differences of about one-fourth degree C. are appreciable. The nerve-ending must actually be chilled or warmed in order to obtain a sensation. Thus, the stimulus must occupy an appreciable time or must cover a large area. For the same reason, bad conductors of heat, like woolen, feel warmer than good conductors, like metal, if below the body temperature, cooler if above. Cool water feels warm if the hand is first held in cold water while rather warm water may feel cold if the hand is first held in hot water. In fact the terms, cold, cool, warm, hot are purely relative. The chilly sensations usually felt at the beginning of fever are probably due to the fact that the interior of the body becomes heated before the exterior, so that the skin feels cold to the nerve endings.

The ideas of sight and sound are very complex. Color sensation and those of pitch and quality of sound are due to rapidity of vibration, like the differences of temperature appreciable. Color ideas are absolute, that is, the same number of vibrations of light gives the same color idea to all normal individuals, whereas temperature and pitch sensations are relative, that is, are compared with previously received impressions. Some persons, however, have the ability ot recognizing the exact pitch of a tone. The primary chemic sensations of taste are sweet, sour, bitter and saline or alkaline. These sensations are all absolute, that is, a substance that is bitter, tastes so to all persons, although it may be agreeable to some, disagreeable to others. Sensations of smell cannot be classified, and we communicate ideas of smell only by comparing to some famlliar odor. Odors cannot even be classified as agreeable or sweet and the opposite, on account of differences of personal opinion. Many sensations of touch, temperature and smell, connected with foods, are incorrectly included with tastes.

CHAPTER XXXVII.—GENERAL SENSES—TOUCH, PRESSURE, TEMPERATURE.

While almost all the soft tissues of the body are sensitive, sharply defined sensations are received only from the exterior and the deep tissues normally give no impression of their existence, though when invaded, pain may result. The endings of the general sensory nerves are of five kinds:

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1. Tactile corpuscles of Meissner, are so situated as nearly to fill certain papillæ of the skin. They are ovoid modifications of epithelium, beneath the rete mucosum, with nerve fibres winding about them, the axis cylinders ending in swellings within the corpuscles.

2. End-bulbs of Krause consist of a vesicle containing fluid and a few nucleated cells, between which the axis cylinders end. They are found mainly in the conjunctiva, mucous membrane of the mouth and in the external genitals.

3. Tactile cells of Merkel, consist of large epithelial cells with nuclei and nucleoli. They are situated in the deeper layers of the epidermis. Frequently, several such cells are grouped together, when they form an end-organ similar to the first variety.

4. Paccinian corpuscles are ovoid, consisting of concentric layers of doubtful epithelial origin. The center contains fluid, into which an axis cylinder projects. They are found in the deep layers of the skin and in other organs, and, hence, are supposed to be concerned mainly in the sensation of pressure.

5. Free nerve terminals, with definite end-organs, are found on the surface of mucous membranes and cornea, projecting as minute knobs between the epithelial cells. In the soft cells of the mucous layer of the skin, similar endings are found. The cornea is not available as a sensory organ, on account of liability of damage to the delicate optic structures, hence any irritation normally causes pain. Mucous membranes are less sensitive, but pain is occasioned by contact of hard objects. or of cold or hot liquids. Otherwise, both the cornea and the internal organs would be liable to injury by voluntary or accidental introduction of solid substances. As already stated, irritation of a nerve trunk or of a free nerve-terminal usually causes pain. This is not the case with the nerve-terminals in the soft layers of the skin, since the contiguous cells practically constitute end-organs for diffusing the pressure, like the four varieties just described.

The writer has already expressed the conviction that touch and pressure senses do not differ except incidentally, according as contact with superficial end-organs enables exact impressions of contour to be conveyed or as the depth of the end-organs prevents the sensation of anything but the degree of pressure. With heavy gloves tactile sensations are so disguised as to become merely those of pressure. It has been questioned whether pain consisted in over-stimulation of sensory nerves or whether it was a distinct kind of sensation. The fact that local anaesthesia of the conjunctiva, exposed dental nerves, etc., prevents pain, but allows the contact of instruments to felt as an ordinary tactile sensation, is in favor of the former view. Tactile sensibility of different parts of the body varies greatly. The genital organs rarely convey such sensations unmixed with manifestations of the rudimentary sexual sense. The most delicate tactile sensibility is located in the tip of the tongue, but for most purposes, the finger tips, especially of the index and middle finger, are employed. In general, flexor surfaces are more sensitive than extensor and anterior than posterior; exposed parts than those habitually covered with clothing, unless hard use causes callosity which covers the end-organs too deeply for fine appreciation

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of stimuli. The delicacy of touch is usually determined by blunt compasses; care being taken that both points are of equal temperature, and that they are applied simultaneously. As the points are brought nearer together, a limit is reached at which it is impossible to distinguish between single and double contact of the points. These limits are approximately as follows:

Tip of tongue	1 millimeter.
Finger tip	2
Palm of hand	10
Back of hand	15
Forearm	40
Thigh	60
Over ensiform cartilage	50
Between scapulae	70

The power of localizing sensation corresponds with the ability to distinguish between single and double contact. For instance, a person blindfolded can locate accurately a pin-prick applied to the finger tip, but on the back, he may indicate a spot several centimeters distant. In disease of the posterior columns of the cord, the localization of a pin-prick may be very inaccurate, and on account of the indistinctness of skin sensations, co-ordination of muscular acts, such as walking, becomes defective. The writer has observed that in paraplegia, with complete motor paralysis and abolition of all skin sensations, the muscular sense has been preserved, that is, the patient could locate a passive movement of a joint.

The sense of touch like the other senses, may be cultivated. Frequent experimentation with the compasses already described, will lead to diminution of the distances at which the two points are felt as one. Tactile sensibility of the toes, as well as motor control, is seen not only in museum freaks, but in certain races in which the feet are not abused. Babies have slight power of localizing sensations, but this faculty is gradually developed. A pencil held between two adjacent fingers is perceived as a single body, but if two fingers are crossed and it is then placed between them, the perception is of two objects, unless the individual becomes accustomed to such use of the fingers. This experiment well illustrates the difference between a sensation—the receipt by a conscious center of an afferent impulse—and a perception—the interpretation of that impulse or more frequently of a number of coincident sensations.

A stimulus of the sense of touch inadequate to cause a distinct sensation, from which perceptions may be deduced, produces the sensation of tickling. The more acute the sensibility of a part, the more difficult it is to tickle it. Thus, the tongue can scarcely be tickled except by a vibrating object, like a rubber band or tuning fork. Itching is a chemic irritation of a deeper sense organ, as by the venom of insects, biliary pigments in jaundice, nitrogenous waste in lithaemia, etc.

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CHAPTER XXXVIII.—TASTE AND SMELL.

These two chemic senses deal with fluids, as touch does with solids. Sensations of taste are excited only by liquids, including solids in solution; sensations of smell only by gases, including volatile liquids and solids. Some liquids are tasteless, some gases odorless. Taste is the sentinel of the digestive tract, smell of both the digestive and the respiratory tracts, giving warning of injurious substances, though man cannot rely upon these sentinels implicitly, while each of the lower animals is liable to be deceived by certain few substances.

The sense of taste is in man, more generally distributed than any of the other special senses of the head and face. While the distribution of the end-organs varies somewhat in different individuals, they are found on the tip and sides of the tongue, the dorsum near the circumvallate papillæ, the fauces and possibly on the tonsils and palate. As in the case of most other senses, an appreciable interval elapses between the taking of a sapid substances into the mouth and the perception of a taste. If the substance is solid and the tongue is dry, it may be dashed down with water without being tasted at all.

The end-organ is the "taste-goblet" somewhat resembling the Paccinian body, consisting of a barrel shaped chamber full of fiuid, surrounded by modified epithelial cells between which the axis-cylinders penetrate.

The nerves of taste are the lingual branch of the inferior maxillary of the fifth supplying the anterior part of the tongue and the glossopharyngeal distributed to the posterior part of the palate. The chorda tympani, of the seventh, is considered a nerve of taste by some. In the rabbit, whose taste goblets are localized, section of the glosso pharyngeal causes atrophy of the collection of end-organs. An electric current in the mouth, as due to fillings of teeth, causes a peculiar metallic taste. Indeed, all metallic tastes are probably due to galvanic action, otherwise chemic solution of the heavy metals by a corrosive liquid. The four primary tastes, corresponding somewhat to chemic classifications, are sweet, due to polyatomic alcohols; sour, to acids; bitter, to alkaloids; salines, to salts of alkalies. To these must be added the metallic taste due to galvanic action, or to the taking into the mouth of salts of the heavy metals. The recognition of agreeable and disagreeable blendings of tastes, forms a crude analogue to the perception of harmony in sounds and colors. After-tastes may be recognized, analogous to the positive and negative after-images of light. Thus, the saline taste of borax persists for a moment after rinsing the mouth, and is then succeeded by a sweet taste.

SMELL.—The end-organs of the sense of smell consist of elongated cells, fusiform on account of a large central nucleus, and connected with branches of the olfactory nerve. These are distributed unly to the upper and part of the middle meatus of the nose, which are lined with squamous epithelium, whereas the respiratory portions of the nostrils are lined with ciliated epithelium. Hence, sniffing is employed to bring air into the superior meatus of the nose, in order to detect faint odors, while the breath is held or the nostrils are closed with the fingers to exclude disgusting odors. As in the

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sense of taste, there must be a proper degree of moisture of the mucous membrane and the odorous substance must actually penetrate to the end-organ. The olfactory nerve differs from all others in springing directly from a rudimentary cerebral lobe and in possessing no trunk, arising as a brush, whose hairs pass through minute openings in the cribriform plate of the ethmoid. It differs from all other cerebro-spinal nerves in consisting almost entirely of non-medullated fibres. While some odorous liquids and solids, like alcohol and camphor, evaporate rapidly, others, like musk, having a strong odor, lose an immeasurably small amount of matter, even after months. In such instances, the sense of smell is stimulated by a quantity of matter not only too small to be demonstrable by ordinary chemic tests, but even by spectrum analysis.

Just as perceptions of taste include sensations of temperature and touch from the mouth, as well as of odor from the nose, so perceptions of smell are often confused with irritation with the ordinary sensory branches of the fifth nerve in the nostrils. Ammonia, pepper, etc., beside possessing characteristic odors, stimulate the tactile nerves by their pungency. Many substances, like onions, supposed to have a strong taste, are "tasteless" if the nose is held while they remain in the mouth. In other words, many of what we call tastes, and especially aromas, are really sensations of smell.

CHAPTER XXXIX.—THE SENSE OF EQUILIBRIUM.

The sense of equilibrium, including the directions up and down, forward and backward, right and left, has its end-organ in the semi-circular canals, and possibly. also in the utricle and saccule of the internal ear. The semi-circular canals form a part of the membranous labyrinth lodged in the petrous portion of the temporal bone, and to be described more fully under the sense of hearing. They correspond in position approximately to the three prime Cartesian planes, being at nearly right angles to one another. Any sudden change in the state of movement of the head causes corresponding changes in the endolymph which fills the canals, but by inertia, the fluid presses more forcibly against one part of the canals than others. Thus if from a position of rest or of moderate movement, one starts rapidly forward, the fluid is thrown against the posterior walls of the canals; if a sudden movement is made to the left, the inertia causes increased pressure against the right walls of the canals, etc. Thus, the beginning, stoppage, increase, decrease or change of direction of motion is marked by differences in the pressure of the endolymph. After a movement has been carried on for some time, evenly, the inertia of the endolyph is overcome and the sense of motion is lost, unless it is apparent to the eye, to the skin on account of increased air pressure from the front, etc. Thus, we are never aware of the motion of the earth by this sense, nor usually of a smoothly running carriage. If one runs or turns round and round in a circle and then stops, the sense of direction and equilibrium is confused and the sensation of round and round motion persists, because a current has been set up in the endolymph.

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Judgments of direction and ideas connected with equilibrium are also largely connected with visal sensations. Thus, persons complain that they cannot ride backward in a car without becoming sick, whereas except at starting and stopping, they could not tell which way the car was going, if their eyes were shut. The inertia of the solid organs, especially the liver, on account of its weight and relative movability, may take the place of the organ of equilibrium, to some extent. The peculiar sensations experienced in an elevator, are dne to the fact that the inertia of the liver is not changed quite as rapidly as that of the rest of the body, so that in rising, the liver draws downward on the diaphragm, while in descending, it presses upward against the heart and lungs.

The nerve of equilibrium is part of the eighth, or according to the old enumeration, the seventh. The equilibrium fibres are as distinct physiologically from the true auditory fibres as are those of the facial nerve or the former portio dura of the seventh.

There seems to be no genuine sense of absolute direction, that is, of the points of the compass. Ideas of direction are due to perceptions of familiar landmarks, of slope of conntry, position of the sun and heavenly bodies, direction of wind, etc. False ideas of north and south are often due to association with maps held in wrong directions. It must be admitted, however that the lower animals and certain human beings are able to locate the points of the compass when all apparent guides are lacking. A spicule of magnetic iron, free to move in a cavity and impinging on nerves, would explain such perception of direction, but there is not the slightest evidence that such an end-organ exists.

A Spray for Pharyngitis Sicca.—The *Riforma Medica* attributes this formula to Blake:

℞ Carbolic acid ..... 60 grs.
Tincture of iodine ..... 7½ grs.
Tincture of aloes ..... 6 grs.
Tincture of opium ..... 10 drops
Glycerin ..... 750 grs.

M. To be applied several times a day.—*N. Y. Med. Jour.*

Acne Vulgaris.—According to Hackett (November *Physician and Surgeon*) the following ointment works admirably used in conjunction with general measures:

℞ Sulphuris precip. ..... ʒ jss
Resorcin ..... ʒ j
Acidi salicylici ..... ʒ ss
Vaselin ..... ʒ j

Signa: Apply at bedtime after scouring the face with tincture of green soap and hot water.

In the morning the ointment should be washed off and cold cream or some dusting powder applied during the day.

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PERISCOPE.

NOSE AND THROAT AFFECTIONS.

C. H. Powell, A. M., M. D.,

Professor of Physical Diagnosis and Clinical Medicine, Barnes Medical College, St. Louis Mo.

Now that the season of the year is upon us at which time disturbances of the nose, throat and lungs are predominating, an article calling attention to the different affections, their causes, pathological characteristics and treatment is certainly of practical importance. Nasal involvement is certainly the most common morbid phenomenon we meet with, of every degree, from simple congestion of the Schneiderian membrane to ulceration, hypertrophy and deflection of the nasal septum. One of the first indications that a trouble exists in the nose is indicated by the presence of a nasal discharge. The most common discharge observed occurs from a simple cold, or more technically termed an acute rhinitis. This troublesome affection usually begins as a dryness of the Schneiderian membrane, which has as an accompanying condition a vaso-motor constriction, the blood vessels are accordingly emptied of their contents, and as a consequence the function of the parts supplied by the blood is temporarily suspended. This cessation of function, however, does not persist longer than twelve or twenty-four hours, when the blood vessels resume their function, but to an extent greatly in excess of what previously existed. There is then a greater amount of blood carried to the parts, and as a result we have the escape of watery element manifesting itself in the shape of a large discharge of mucus, which, from the fact that it follows an inflammatory process, is in a strict sense an exudation, not a transudation. This flow of mucus is usually very profuse, causing the patient to be continually using his kerchief, which is saturated with the discharge. The attack is often ushered in by repeated attacks of sneezing, headache, and a sensation of fullness in the frontal sinus. These unpleasant sensations usually are markedly relieved as soon as the discharge of mucus is well established. This first state of morbid activity on the part of the nose gives us, in a most typical form, the symptoms described as an acute nasal catarrh. For the relief of such an acute condition the indications to be met consist in applying an agent or agents that will constrict the blood vessels, and at the same time destroy the germs associated with the discharge. Having accomplished this, the inflamed mucous membrane should be protected from the influence of the atmospheric irritants. As the treatment usually employed this trouble, I will outline the modus operandi. In the first place, I provide myself with a Mulhall-Warner nasal douche, which has a long curved tip for insertion up behind the uvula. I find this simple instrument of signal utility in the treatment of all nasal difficulties. I now prepare a solution of one part of Glyco-Thymoline (Kress) to six parts of lukewarm water, and wash out the nose thoroughly; having accomplished this, I next spray the nares thoroughly with a solution of cocaine, ten grains to the ounce, and then complete the

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treatment by throwing into the nose with a De Vilbiss instrument some heated vaseline, which soothes, protects, and keeps the constricting influence of the cocaine solution in situ for a considerable interval. I seldom find it necessary to repeat this treatment more than once or twice. The relief experienced in every instance is prompt and grateful to the patient.

There is another class of patients who are sufferers from a chronic nasal discharge whose condition is due to the occupation engaged in, thus those who work in factories where the air is continually loaded with dust and debris, being constantly exposed to the irritating influence of these particles, the nasal disturbance is perpetuated. In this class of cases the same plan of action is referable, namely first thorough cleansing of the nose with Glyco-Thymoline (Kress) solution in the same strength as before, and the after-application of an unguent. A very useful remedy that gives well-marked beneficial results is a 4 per cent menthol and alboline mixture, which is a very efficient and cooling ointment, and being liquid it can be readily sprayed upon the nasal mucous membrane.

In all cases, however, due to whatever cause, the action of Glyco Thymoline (Kress) has impressed me most favorably. I will outline two cases wherein I have derived the most gratifying results from this remedy.

Case first: "ACUTE RHINITIS."

A lady consulted me with a very bad cold which had been persisting to her intense annoyance for several days. She called upon me in the belief that the difficulty was increasing instead of diminishing. Posterior nasal washing was at once done, using Glyco Thymoline (Kress) in warm water, one part to six, and the nasal fossae sprayed with cocaine solution, patient was also given a six ounce bottle of Glyco Thymoline solution, and advised to apply with an atomizer three times a day. Recovery was prompt and thorough under its use.

Case second: "HYPERTROPHIC RHINITIS."

This case was in a man who worked out-doors in all kinds of weather. In addition he was an inveterate tobacco user, smoking as many as two dozen pipes of tobacco daily. He was also subject to great relaxation of the pharyngeal structures, had a cough, enlarged tonsils, and was a terrible snorer, sleeping with his mouth open. This patient was treated with Glyco Thymoline (Kress) in solution, and the throat frequently gargled with a fifty per cent solution of the same remedy. Internally quinine, iron and strychnia were given him, and he was advised to lessen the amount of tobacco he was consuming. He was also told to dress more warmly. The outcome of the case was very slow, but an uneventful recovery took place.

These cases demonstrate beyond the peradventure of a doubt the therapeutic efficacy of Glyco Thymoline (Kress) as a remedial agent.

—*Medical Herald.*

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The Medical Fortnightly.

Issued Tenth and Twenty-fifth of Every Month by the Fortnightly Press Co.

UNDER THE EDITORIAL DIRECTION OF

FRANK PARSONS NORBURY, M. D. AND THOS. A. HOPKINS, M. D.

Secretary: CHARLES WOOD FASSETT, M. D.

A COSMOPOLITAN BIWEEKLY FOR THE GENERAL PRACTITIONER

Editorial Offices in St. Louis, Chicago, Cincinnati, Jacksonville, St. Joseph, Kansas City, and Pueblo, where specimen copies may be obtained and subscriptions will be taken.

Address all business communications to the Fortnightly Press Company.

Address all contributions and books for review to the Editors, Suite 312, Century Building, Saint Louis.

Volume XVII **MARCH TWENTY-SIXTH** **Number 6**

Editorial Department.

Medical Legislation in Illinois.

IN ORDER to meet the demands for medical reform and to shape measures for legislation the physicians of Illinois are organizing for this purpose. It will be remembered that Bland and his followers have organized in Chicago and elsewhere for the purpose of having the present Medical Practice Act removed from the statute books. They claim that the act, as it now stands, is pernicious and is exclusive, and does not give liberty nor promote the best interests of the medical profession. It is generally known, however, that Bland is but the spokesman for the free-thinkers and general outcasts of the medical profession who seek to impose upon human credulity by advertising in the daily papers of their wonderful cures, and in other ways seeking to make themselves appear as great medical men, when, in reality, they are pigmies and usually men of shallow intellect.

Medical progress has too meet this class of people, and it can only be done by successful legislation. To this end it is the duty of every reputable physician to lend his aid and support for good medical laws

Illinois has been one of the foremost States, and it is both timely and appropriate that the subject of "Medical Laws and Medical Organization" in Illinois should be discussed. The Morgan County (Illinois) Medical Society has taken the initiative in the discussion of this subject, and on the 12th of April, next, a meeting will be held in Jacksonville, at which time delegates will be present from the Peoria Medical Society, Military Tract Medical Society, the Adams County Medical Society, the Western Illinois Medical and Surgical Society, the Macoupin County Medical Society, the Central Illinois District Society, the Decatur City Medical Society, the Sangamon County Medical Society, the Brainard District Medical Society, and the Morgan County Medical Society, and the following subjects will constitute the program:

No. 1. "History of Our Medical Laws," Dr. A. C. Corr, East St. Louis.
No. 2. "Efficiency of Our Health Laws," Dr. H. W. Chapman, Whitehall; Dr. S. T. Hurst, Greenview.

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No. 3. "Efficiency of Our Laws Relating to Our Medical Education and to Practice," Dr. L. R. Ryan, Galesburg; Dr. E. M. Eckard, Peoria; Dr. E. W. Gilliand, Colesburg.

No. 4. "Powers and Limitations of State Board of Health under the New Act," Dr. J. A. Egan, Secretary State Board of Health, Springfield.

No. 5. "Local Medical Societies and Their Relation to District and State Societies," Dr. W. T. Moffett, Williamsville.

No. 6. Relation of Medical Societies to City, County and State Offices."

The officers of the Illinois State Medical Society have been invited to lead in the discussion of these topics; also prominent members of the profession in Central Illinois will be present to participate in the proceedings.

OUR saddest and most painful duty is performed in reporting the death of our dearest friends. It is with feelings of deep regret that we are compelled to announce the death of one of our esteemed collaborators, Dr. Ernest Brewster Sangree, at the home of his father in Harrisburg, Pa., on February 23d. Dr. Sangree had been a warm, personal friend of the writer from the beginning of our medical college days. As my room-mate this friendship became cemented into lasting and high personal appreciation of his sterling qualities of manhood, his fine discrimination and excellent scholarship; his genial, whole-souled character, which won for him friends and made him a leader among his fellows. As a student he took high rank, and as a teacher he won an enviable position, first, as Director of the Laboratory of Histology and Bacteriology, Medico-Chirurgical College, Philadelphia, and later as Professor of Pathology, Vanderbilt University, Nashville. Dr. Sangree was recently elected to the chair of Pathology and Bacteriology, University of Illinois, Chicago, but his severe illness, cerebro-spinal meningitis, cut short his very useful and eminently scientific career. American medicine can ill afford to lose such men, because there are few like him. His whole life's work, his characteristics in fact, were moulded in that large, broad humanity which makes men useful, lovable, and gives them distinction as being one among a thousand. We feel that we have lost a dear friend, and American medicine a stanch and willing worker.

F. P. N.

MR. I. SLOAN, representing Kress & Owen, is detailing St. Louis in the interest of glyco-thymoline. Mr. Sloan was connected with the subscription department of the *Journal of the American Medical Association* for several years, and has a wide acquaintance among the physicians of St. Louis, all of whom will be pleased to see him again.

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A WORK of this character is of special value to the young physician, although it may frequently be used to advantage by those more experienced. This, the second, edition has an extensive index, and brings the treatment of diseases thoroughly up-to-date by giving the newer remedies due consideration. Blank pages are inserted for recording new prescriptions.

OVER 1,000 PRESCRIPTIONS OR FAVORITE FORMULAE OF VARIOUS TEACHERS, AUTHORS AND PRACTICING PHYSICIANS. The Whole Being Carefully Indexed and Including Most of the Newer Remedies. Cloth. 300 Pages. Postpaid $1.00. THE ILLUSTRATED MEDICAL JOURNAL CO. Publishers,. Detroit., Mich.

LITTLE need be said in behalf of this work, it has earned the approval of the profession, and the present edition will accentuate its popularity. Being the result of thorough and careful revision, and considerably enlarged, the volume presents many advantages, and must find an increased field of usefulness. It may truly be called a "practical" treatise, and while it is especially suited for the needs of the class-room as a text-book, it is equally serviceable in the hands of general practitioners who have to treat this common and troublesome class of diseases. The success of the book is moreover shown in the increased number of copies printed, whereby it has been found possible to lower the previous moderate price, notwithstanding the addition of 48 pages and 12 full-page plates.

HYDE ON THE SKIN. New (5th) Edition. A Practical Treatise on Diseases of the Skin, for the use of Students and Practitioners, by JAMES NEVINS HYDE, A. M., M. D., Professor of Dermatology and Venereal Diseases in Rush Medical College, Chicago. In one octavo volume of 866 pages, with 111 engravings and 24 full-page plates, 8 of which are colored. Cl. th, $4.50, net; leather, $5.50, net. Philadelphia: LEA BROTHERS & CO.

THE author in this volume has aimed to cover the entire subject from a practical standpoint and yet to avoid all speculative and theoretical views. Its arrangement is primarily pathological and secondarily regional, a plan which gives the student and practitioner all the obvious advantages derived from the natural method of understanding, first, the disease itself, and thereby its effects in various organs and their treatment. The information conveyed by the book is equally modern and up-to-date. The new edition is the result of a searching revision, visible not alone on every page, but also in the addition of seventy-eight pages, thirty-one new engravings and six new full-page plates. The illustrations form a special feature, not only in their abundance and originality, but also in their teaching power. Colors have been freely used in the text pictures as well as in the plates. The volume is convenient in size, and its price is fully represented in its value.

DUDLEY'S GYNECOLOGY. A Treatise on the Principles and Practice of Gynecology. By E. C. DUDLEY, A. M., M. D., Professor of Gynecology in the Northwestern Medical School, Chicago. New (2d) Edition. In one very handsome octavo volume of 717 pages with 453 engravings of which 47 are in colors and 8 colored plates. Cloth, $5.00, net; leather, $6.00, net. Philadelphia: LEA BROTHERS & CO

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PRACTICE OF MEDICINE. A Manual for Students and Practitioners. By GEO. E. MALSBARY, M. D., Assistant to the Chair of Practice, Medical College of Ohio University, Cincinnati. Illustrated. Philadelphia and New York: LEA BROTHERS & CO. Price, $1 50, net.

ALTHOUGH not extensive enough to be of much service as a reference work, this manual is a valuable assistant for the student. The subject is taken up in the usual manner, and the most modern views of diseases are given. The arrangement is excellent, the various synonyms are given, sections on history, etiology, symptomatology, complications, diagnosis, prognosis, prophylaxis and treatment, the main points being indicated by italics.

THE IRRIGATION TREATMENT OF GONORRHEA: ITS COMPLICATIONS AND SEQUELAE. By FERD C. VALENTINE, M. D., Professor of Genito-Urinary Diseases in the New York School of Clinical Medicine, etc., etc. WILLIAM WOOD & CO., New York, 1900.

THIS book can be read in two ways: one after a hard day's work followed by a comfortable after-dinner smoke; the other when in haste to look up an important, urgent point in treatment. The first mentioned way gives the reader instruction, and often in an entertaining form. The entertainment, however, always carries with it at least one practical point which may be of great value at the next moment of the physician's career. The seriousness of Prof. Valentine's writing is not at all impaired by such spontaneities as the following: On page 208 (in the chapter on the Marriage of Gonorrheics) he mentions several writers who speak of the frequency with which men acquire gonorrhea, and adds, "the author can positively assert that at least one man, now almost fifty years of age, has not been so unfortunate." Whether this somewhat personal remark is a bit of unconscious or intentional humor it does not detract from the object with which it manifestly was written, namely, to show the frequency of gonorrhea. On page 187 (in the chapter on Residual Gonorrhea in Women) Prof. Valentine instructively relates the case of a woman who communicated gonorrhea to her lover, and terminates his recital thus: "As an explanation for infecting him and not others, she offered that he was the only one with whom she experienced an orgasm, while she merely submitted to the others for financial gain." To show the practical value of the book to physicians we should have a copy of it in its entirety. Avowedly written for the general practitioner, it is arranged for his use. If careful employment of language and painstaking attention to details of technique can communicate the results of experience, Prof. Valentine has succeeded in showing even the novice in genito-urinary diseases, how he can do the work as successfully as the most experienced. The chapters on chronic gonorrhea and its treatment are especially commendable.

B. T. W.

THE STYLUS.—A new journalistic venture under the above title has lately made its appearance, and a very creditable appearance it is. *The Stylus* is edited by Dr. Wm. Porter with the active assistance of the faculty of Beaumont Hospital Medical College. It starts off with, and promises to maintain a high order of excellence.

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Faith Cure and the Law.

BY E. F. BAKER, M. D.,

JACKSONVILLE, ILL.

Read before the Jacksonville Medical Club, November 4, 1899.

CIVIL and religious liberty have always been watchwords with the American people, ever since they became a nation. Civil or political liberty guaranteeing all men equal rights before the law; and religious liberty guaranteeing against interference by the State with any man's religious views, or with matters of the conscience. The constitution of the State of Illinois, Sec. 3, says: "The free exercise of religious practices and relationships without discrimination, shall be forever guaranteed to all its citizens—such practices, however, shall not jeopardize the peace of the State." Under this clause of the State constitution, the faith healers and so-called christian science doctors find a refuge; claiming that it is a matter of christian faith with them, and that their treatment of disease is only a christian rite or ceremonial. The last legislature of this State seem to have taken the same view in the construction of the medical practice act passed last winter, in not requiring these people to qualify as doctors by taking out a license. The legislative committee of the State Medical Society seem not to have been fortified against this argument, and the law, as passed, excludes all healers who make use of mental and spiritual and magnetic means, from the provisions of the law. These people have a free hand in Illinois; no examination by the State Board; no license required; no qualification other than what each man for himself may think requisite. As far as these people are concerned the State of Illinois has no law governing this practice.

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The question involved is: Do the christian science people—the disciples of Mrs. Eddy—and the faith healers, whose chief head and representative in the West is Dowie of Chicago, do these people practice medicine, or are they simply exercising a religious rite? We must admit that their combination of the two offices, of healer and dissemination of peculiar religious views, is going to be a difficult proposition to meet by legislative enactment. We cannot deny their right under the constitution to teach that the Lord will heal all manner of diseases in answer to prayer, as the Dowie people teach; or that all diseases are but a delusion of the mortal mind, as the Eddyites claim. I say we cannot deny these people the right to believe and teach these things. Now, can we deny them the right to practically apply them? If they cannot be applied to the sick, they are certainly, of all things, under the heavens above, or the earth beneath, the most stale, flat and unprofitable. If allowed to apply them, I do not know of anything—not certainly a Kimberly diamond mine in South Africa at the present time—that offers so much for so little.

That these people are practicing medicine and assuming all the functions of the physician, with the worldly eye steadfastly fixed upon the business end of the transaction, shows but too plainly in the rapid accumulation of wealth, both by Dowie and Mrs. Eddy. It is said that Dowie came to Chicago a few years ago a poor man—that he is now worth $250,000; has established a bank, built a tabernacle and a hotel. He also publishes a morning and evening paper. The christian science church was organized in 1879. There is a large training school at Boston, and it does not take long to receive training in it. The first course consists of twelve lessons, and continues through three weeks. The tuition is $300. After a year's practice the student returns for six more lectures, for which he pays $200 more to Mrs. Eddy. This course is followed by a week of theology, for which he pays $200, or a total of $700. Mrs. Eddy's book, "Science and Health," sells at $6, and all are required to possess this text-book. The graduates of the Boston Training School are authorized to give lectures and teach. They usually give a series of ten lectures, for which the student pays $100. At the end of the course he is supposed to be equipped to cope with any and all diseases, by prayer at a dollar a prayer, whether present or absent, makes no difference in the efficacy of the prayers. I have never listened to a genuine christian science prayer, but I suppose the burden of it would be, that the mortal mind of the patient should be disillusioned; that he should screw his faith up to the belief that there was nothing the matter, and if the faith is strong enough, the disease will behave like Mark Twain's fractured bone—just withdraw. With the mental strabismus, and peculiar intellectual obliquity shown in the hopeless jargon of incomprehensible phrases of Mrs. Eddy's writings, with literary lapses that are the sport of her critics, may we not expect that portions of Mark Twain's article may be construed as an endorsement of this method of cure?

I have not seen the case of Samuel L. Clemens reported in christian science literature, claiming a great cure of a very aggravated case of fracture, or a series of compound fractures; but Mark's language is very plain

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and explicit. He says, "Under the powerful influence of the near treatment and the absent treatment, my bones were gradually retreating from view; my body diligently straining and stretching this way and that, to accommodate the process of restoration; and every minute or two I heard a dull click inside, and knew that two ends of a fracture had been joined. This muffled clicking and gritting, and grinding, and rasping continued the next three hours, and then stopped, the connections had all been made. All except dislocations, there were only seven of these, hips, shoulders, knees and neck, so that was soon over. One after another slipped in their sockets with a sound like pulling a distant cork. I jumped up as good as new." Where can stronger endorsement be found? Mark also pays his homage to Mrs. Eddy in the following: "It is the first time since the dawn days of creation that a voice has gone crashing through space with such placid and complacent confidence and command."

The Chicago *Tribune* said immediately after the appearance of Mark Twain's article: "No system can stand long when attacked by such satire as that of Twain's recent article."

I met a rather intelligent lady in Chicago lately, who is a devout follower and believer in Mrs. Eddy's teaching. I asked her if she had seen Mark Twain's article? She said, "Yes." "What do you think of it?" I ventured to ask. She said, "I never laughed so much at anything Mark ever wrote;" but she added seriously, "When Mark Twain attacks Mrs. Eddy's system, he does not know what he is talking about." This lady is not a healer either—just a dupe of this peculiar teaching.

The opinion of Attorney-General Aiken on the liability of the non-diagnosing practitioners was recently obtained by the State's attorney of Douglas county in the case of a six-year-old child which was treated by christian science healers, which died of typhoid fever. The State's attorney wrote to the attorney-general for an opinion as to the liability of these people under the criminal code. The attorney-general answered in the negative. The section of the criminal code covering the case reads: "It shall be unlawful for any person having the care and custody of any child to cause or permit the life of such a child to be endangered, or health to be injured, or to wilfully cause or permit such child to be placed in such a situation as that its life or health shall be endangered." The attorney-general says this clause does not apply, because not done willfully, but honestly believing they were doing what was best for the child. In this case we see the pernicious effects of this joining together of religious belief with the treatment of disease. Had this case been treated by some one equally ignorant of the proper management of disease, and no question of religious belief entering into the conduct of the parents or the doctors, would the opinion of the attorney-general been the same? I doubt it.

In the case of Henrikka Batsch, a disciple of Dowie, who was prosecuted for practicing without a license, and convicted in Judge Everett's court and fined $100, because she practiced "laying on of hands," and did not confine herself strictly to mental and spiritual means. The judge said: "If a person does not use drugs, or material means or remedies, and does not limit himself to spiritual and mental means strictly, he is, in my opinion,

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clearly liable. When the defendant resorted to laying on of hands then she is liable under the law." Here is an interpretation of the new law, making a distinction without a difference. I think this poor woman's attorney failed to impress upon the judge before rendering this decision, that the spiritual essence of the highest potency will flow out better through the medium of the hands, and also that a patient very near death cannot receive the full benefit of this concentrated spiritual influence in any other way except by actual contact and the laying on of hands. I think the attorney was negligent; he should have had an acquittal of his client. The judge failed also in recognizing the anatomical dwelling-place of the Dowie spirit—the palms of the hands, attended by an itching.

If his Satanic majesty has had anything to do with this whole matter, it is at this point. It has been said that the latter end of the nineteenth century, with all its accumulated wisdom and enlightenment, is a queer time to begin again to sell prayers for cash, and the suspicion has been raised that no sane man would attempt cures in this way unless he had a tip from the same source that caused Mother Eve to eat the apple.

That the Medical Practice Act passed by the last legislature suits nobody but the faith fadists, is admitted by all It seems to me now is a favorable time to formulate an amendment to the present law, covering the case, and present it for passage at the first meeting of the legislature. Public opinion is what makes members of the legislature act, and public opinion is forming rapidly on this subject. The slaughter of the innocents still goes on. The press and pulpit are fulminating against this practice daily. The legislative committee certainly ought to be able to formulate what is needed, and at the same time be in harmony with the State constitution. The forty-second General Assembly does not meet till January, 1901. There is no session of the legislature next winter, unless there should be a called session. There has been some talk through the newspapers of an extra session. Should there be one, it would be a very favorable time to get full consideration of this matter. The session of the General Assembly in 1901 will be a very busy one; a United States Senator to elect, and possibly two, and many matters of pressing moment. The legislative committee will have work to do, and the profession of the State should be a unit in this matter behind the committee.

Some general reflections upon the relations of the State to the medical profession, and the obligations of the government, both National, State and municipal to scientific medicine may not be out of place. Where does the executive power of the government get its knowledge of sanitary matters, in such questions as purity of the water supply in dealing with epidemics? When the commerce of the nation is threatened by an epidemic of yellow fever, putting an embargo upon all transit of goods, as well as persons, do the officers of the government not derive gratuitously all knowledge as to what measures are necessary to control and combat this scourge directly from the scientific labors and investigations of the medical profession? Who gave vaccination to the world, by means of which that greatest scourge of mankind has been controlled? Who search out with the microscope those bacteria that poison the water supply of the city, and by

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means of such knowledge know what to do? Do the authorities ever consult the osteopaths as to what is the matter with the water? If they did, they would probably get for an answer, "Remove all the bones from your water supply, as most all of the ills of mankind are caused by misplaced bones."

If the faith curists were appealed to, they would in all probability say to the people of Chicago, fill up your big ditch, save your millions you are squandering on that big drainage channel, let the people drink all the sewerage from the Chicago river; it is not necessary to boil the water, drink your fill, and then fall upon your knees, and all will be well, because it is written, if ye but have but faith—faith—faith, is all the sanitary measure necessary.

If the followers of Mrs. Eddy were consulted about contaminated water, what would they say? "There is no contamination, this is all a delusion of mortal mind, there is no water; there is no such thing as disease; there is no such thing as matter."

DR. H. L. MACLAURY, of Lea Brothers & Co., spent a few days in St. Louis recently. Visits from Mac. do us good, their shortness is almost as trying as is their infrequency.

THE WESTERN OPHTHALMOLOGIC AND OTO-LARYNGOLOGIC ASSOCIATION will hold its next annual meeting in St. Louis, April 5, 6, 7, 1900. A most interesting scientific and entertainment program has been prepared.

MALARIAL FEVERS.—In cases of malarial fevers in which quinine is not well tolerated, or is objected to for other reasons, it is interesting to note that quinalgen is growing a decided acquisition to the treatment. Professor G. Scognamiglio (Die Heilkunde) has reported very promising results from this preparation in cases of malarial fevers and even those of virulent type, such as are frequently met with in the marshy districts of Italy. The drug was given in daily doses of 30 to 50 grains. Microscopical examinations showed that under the use of quinalgen the malarial organisms underwent destruction. Scognamiglio's clinical observations have been confirmed by Drs. Loti and Colotti, Professors Raimondi and Ciulini, and more recently by Dr. Servoss (Medical Council). Further experiments in this direction are fully justified in view of the satisfactory results already obtained.

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PHYSIOLOGY.

BY A. L. BENEDICT, A. M., M. D.,
BUFFALO.

CHAPTER XL.—HEARING.

Physically considered, sound consists of vibrations of air, or other fluids, the line from crest to trough being that of the path followed. The advance of any sound wave is about 1100 feet per second in air and, while the rapidity varies for different media, it does not vary for different sound waves. Sounds appreciable to the human ear vary between 18 and 24,000 vibrations per second. A musical tone is said to be an octave higher than another when it has twice as many vibrations as the latter. The octave is further divided into twelve semitones. According to physical standards, the lowest audible C has 32 vibrations per second, the next one 64, etc. Thus, any C may be represented by "2^a," and the C next higher by "$2^{a\ plus\ 1}$." Any intermediate note of the scale is represented by "$2^{a\ plus\ \frac{n}{12}}$," in which n represents the number of semitones above the lower C. All musical standards are somewhat sharp, as compared with the physical. The total range of sounds audible to the human ear is about eight octaves, there being quite a range of shrill sounds heard by some ears and not by others. An irregular mixture of sound waves constitutes a noise, a comparatively simple blending a chord or discord, according to the way in which the troughs and crests of different waves augment or neutralize one another. A single sound wave is termed a musical tone. It is practically impossible to produce a single sound wave, but if one wave is much louder than all the others, it is commonly accepted as a tone. Waves, whether of water, air or other media, and whether produced mechanically or by sound, light, etc., differ according to intensity or size, i. e., the distance between trough and crest; secondly, the frequency with which one wave follows another; thirdly, the shape of the wave due to accompanying minor waves and ripples. In the case of sounds, we distinguish therefore:

1. Loudness, due to the amplitude of the acoustic vibrations.

2. Pitch, varying according to the rapidity of the sound waves per second. That this has nothing to do with the rate of transmission is shown by the fact that music heard at a distance preserves the original chords, notes of high pitch being transmitted at the same rate as those of low rapidity of vibration.

3. Quality, depending on the number and variety of the accompanying ripples of sound. The quality of the human voice depends largely on the resonance of the bony chambers of the head. The accompanying ripples which produce quality are called overtones or harmonices.

The organ of hearing, including accessory parts, is divided as follows:

1. External ear, consisting of the fibro-cartilaginous pinna, to which are attached the three auricular muscles, and the external auditory canal or meatus. The latter contains specially modified sebaceous glands which

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secrete the cerumen or ear-wax. Although an excretion chemically, and in the sense of being lost to the body, it fulfills the useful function of lubricating the skin and of acting as a poison to some insects which might otherwise do harm. In many of the lower animals, the pinna is of considerable value in conducting sounds, being turned in various directions, as required. In the human being, it is of very little use.

2. Middle Ear, or Tympanum, is an irregular cavity in the external part of the petrous portion of the temporal bone, and is lined with modified ciliated epithelium, which serves to keep the cavity clear of mucus and epithelial debris through the Eustachian tube. Externally the tympanum is closed by the tympanic membrane or drum, which prevents the entrance of air and foreign bodies, but allows the transmission of sound waves. Internally, the bony wall is interrupted by two fenestræ, closed by membrane, the fenestra ovalis being opposite the opening in the stapes, and separating the air of the tympanum from the perilymph of the vestibule of the internal ear; the fenestra rotunda separating the air of the typanum from the perilymph in the scala tympani cochleæ. Anteriorly, the tympanum communicates with the pharynx through the Eustachian tube. The lower part of the Eustachian tube, being membranous, is ordinarily closed. Otherwise respiration, swallowing, etc., would alternately inflate and deflate the tympanum, and the sound of one's own voice would be disagreeably loud. By swallowing forcibly, however, the Eustachian tube is opened and the tympanum is filled with air. The tympanic membrane has attached to it the handle of the malleus, one of the three auditory ossicles. The ossicles are so arranged as to form a lever, so that vibrations of the tympanic membrane cause corresponding movements of the membrane of the fenestra ovalis, by means of which hydraulic waves are set up in the perilymph, which are communicated to the endolymph, to be described later. As the perilymph is indirectly in communication with the cerebro-spinal fluid, differences of tension between the external air and the air in the tympanum, may so affect intra-cranial pressure as to cause dizziness and other cerebral symptoms. Thus, in ascending rapidly in a balloon, in descending in a diving bell, or in entering a caisson, it is necessary to swallow repeatedly, so as to equalize the pressure on the two sides of the tympanic membrane. The ultimate equalization of pressure between the air in the tympanum and the perilymph and cerebro-spinal fluid is a more complicated process, depending largely on lymphatic absorption, osmosis from capillaries, change of general blood pressure, etc. In colds of the head. involving the pharynx and mouths of the Eustachian tubes, even if there is no inflammation of the middle ear, the tympanum becomes a closed cavity, its oxygen is absorbed, and the partial vacuum thus produced causes an irritation of the terminals of the auditory nerve, resulting in sensations of roaring, ringing, chirping, etc. With the restoration of pneumatic equilibrium by swallowing, inflation of the tympanum, etc., these sounds disappear, unless there is actual inflammatory irritation of the middle or internal ear.

3. Internal Ear, well termed the Labyrinth, consists of a closed membranous sac, bulging and contracting to form various shapes, afterward to be described, and filled with a watery fluid called endolymph. The mem-

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branous labyrinth is contained in a similarly shaped cavity in the petrous portion of the temporal bone, called the bony labyrinth. Except at certain necessary points of attachment, the two labyrinths are separated by a thin layer of liquid called perilymph, identical with the cerebro-spinal fluid, so that the delicate organ of hearing rests in a water-bed to protect it from injury by accidental jars.

The labyrinth is divided into three portions:

1. The semicircular canals, which appear to be connected only with equilibrium and to be associated with the organ of hearing only as a matter of anatomic convenience.

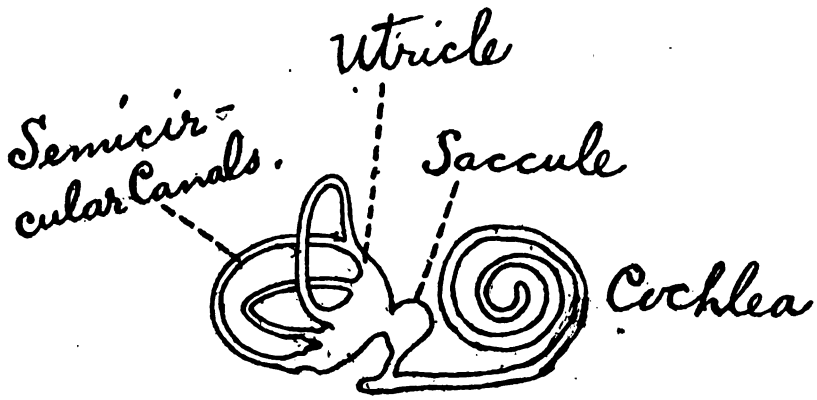

DIAGRAM OF MEMBRANOUS LABYRINTH (CLELAND).

2. The Utricle and Saccule. In the former, free communication between the different semicircular canals is effected. Both utricle and saccule contain minute concrements of calcium carbonate, called otoliths, and, between the columnar epithelial cells which line the cavities, and with which the axis cylinders of part of the auditory nerve blend, are situated rush-like prolongations from the epithelium. When, as previously described, the auditory ossicles convert the acoustic waves of the air and tympanic membrane into mechanical vibrations of the membrane of the fenestra ovalis, the perilymph of the vestibule—the bulging of the bony labyrinth to accommodate the utricle and saccule—is set into motion, and these waves are transmitted to the endolymph. The otoliths are moved against the epithelial filaments already described, as pebbles are moved among the rushes of a pond. The larger the wave, the greater stimulation of the auditory nerve filaments ensues, and, thus, we gain sensations of relative loudness or softness of sound.

3. The Cochlea. The cochlea is coiled simply to economize space, and in some animals, such as birds, the corresponding organ is straight.

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The bony cochlea is divided by bony and membranous septa into three canals. Two of these, the scala vestibuli and the scala tympani, connect at the apex. They are filled with perilymph, and are subjected by means of the fenestra rotunda to changes of pressure within the tympanum. They have no direct connexion with the organ of hearing. The third canal, the scala media, contains the organ of Corti. For detailed description of this, reference is made to works on histology. It consists of a series of pairs of pillars of dense fibrous tissue, each pair connected by a strand of more delicate membrane, against which rest the terminals of one branch of the auditory nerve. The pillars and the subtending fibres become smaller and smaller as the apex of the spiral is approached. According to the tension with which the strands of membrane are held and their length, they are adapted to vibrate in unison with sounds of gradually increasing pitch, so that the organ of Corti is supposed to transmit to the brain, sensations of pitch. This view is corróborated by the fact that there are about 3000 pairs of pillars with subtending strands, corresponding to about 32 to each semitone, while the most delicate ears are said to appreciate differences of one thirty-second of a semitone. The perception of quality is merely the sensation of the pitch and loudness of faint accompanying vibrations. A well trained ear may even recognize the overtones as such. *Vice versa*, a person of no musical ability cannot even distinguish the component tones of which a chord is formed.

While sounds may be carried by vibrations of water, wood, metal, the bones of the head, etc., they are resolved by the tympanic membrane into gross mechanical vibrations, for the purpose of stimulating the nerve endings of the utricle and saccule, and of producing sensations of relative loudness, while the organ of Corti vibrates in response to molecular, acoustic vibrations. Thus, loudness and pitch are sensations derived by distinct branches of the auditory nerve from equally distinct subdivisions of the auditory end-organ. The sympathetic vibrations illustrated by the organ of Corti, are by no means unparalleled. It is a common annoyance of pianists to find that certain notes produce a jangle, which may be traced after long search to a picture wire, a roll of music, a loose piece of wall paper, or some other article that happens to have the same self-vibration, that is, to be so constituted that it will vibrate in sympathy with any vibration of a certain rate per second. A voice that naturally or by skilful use strikes the dominant note of a lecture-room, is heard more easily because of the added resonance of the walls and ceiling of the room. Certain voices that strike the self-vibration of a telephone diaphragm may be heard at a distance from the receiver, although the vibrations are transmitted as electric waves, and are made to pull and relax the diaphragm by magnetic attraction. If the tympanic membrane were flat, it too would have a self-vibration which would magnify certain tones and cause unpleasant sensations of loudness. The conic shape nearly removes this possibility, while the action of the tensor tympani muscle, reflexly changes the tension, and consequently the self-vibration of the drum, whenever any appreciable augmentation of certain tones occurs.

Judgments of direction of sound are formed mainly from knowledge of probabilities, a sudden and unfamilar sound, or one of an ordinary nature

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in unfamiliar surroundings, being located very imperfectly. The only physiologic means of judging of direction is according to the relative loudness of the impressions received by the two ears. It is practically impossible to tell whether a sound comes from directly in front, or directly in the rear. If only one ear is employed, it is impossible to determine the direction of a sound. Indeed, persons who usually employ both ears, are likely to feel that sounds heards with one ear emanate from the ear itself. This is especially true if the sound is conveyed to the ear through a tube, as a speaking tube, telephone receiver, stethoscope, etc. The lower animals, being able to change the direction of the external ear rapidly, are better able to distinguish the direction from which sounds come.

Judgments of distance of sound, like those of objects seen, are based on estimates of the magnitude and distinctness of the sensation received, as compared with known effects previously experienced at known distances. Thus, when a ventriloquist purposly renders his speech faint and indistinct, we interpret it as of normal distinctness and loudness, but as coming from a distance. Similarly, objects seen indistinctly through a fog are interpreted as larger than they really are.

CHAPTER XLI.—SIGHT—CONSTRUCTION OF THE EYE.

The eye consists of three layers of tunics, arranged from without inward, as follows:

1. The sclerotic consists of tough fibrous tissue, continuous with the sheath of the optic nerve, and, ultimately, with the dura mater. tt forms five-sixths of a hollow sphere, and serves to give support to the internal structures and attachment to the external muscles which move the eye.

1A. The deficiency of the sclerotic is filled in anteriorly by the cornea, composed of delicate, transparent connective tissue. It forms one-fourth of a sphere of smaller radius than the sclerotic.

1B. The cornea is covered anteriorly by the conjunctiva, a mucous membrane reflected over the lids and the anterior third of the eye. The conjunctiva is not properly a tunic of the eye. It serves to facilitate ocular movements, on account of lubrication by the tears, to prevent foreign bodies from penetrating the connective tissue about the eye, and, by osmosis, to nourish the anterior portion of the eye. It also protects the ocular structures from the direct action of the tears, the air, etc. Over the cornea, the epithelium of the conjunctiva becomes very delicate and transparent, and the structure of a mucous membrane is lost.

2. The choroid is also a connective tissue coat, but very rich in blood vessels, and hence serving to nourish the other coats. Many of its cells are pigmented to prevent the reflexion of light from the interior of the eye, and it is imitated by a coat of platinum black in various optical instruments

2A. Approximately opposite the junction of cornea and sclerotic, the choroid is thrown into folds, the ciliary processes. The connective tissue cells of the choroid are modified to form two circular unstriped muscles, the iris and ciliary muscle, having their support from the ciliary process.

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2B. The ciliary muscle encircles the crystalline lens, and, by a mechanism to be subsequently described, controls the focusing of the eye.

2C. The iris, variously pigmented in different individuals, but usually similar in both eyes, consists mostly of radiating fibres, but with a very strong development of circular fibres near its central margin. Its open center is called the pupil, and this appears black, for the same reason that any small hole in an unlighted chamber appears black. If the interior of the eye is illuminated, the pupil appears red from the reflexion of light on the blood in the choroid and retinal vessels. This illumination must be oblique, since rays of light entering the pupil from the front are reflected from the retina, and are refracted by the lens, so they do not meet the eye of the observer. The iris and ciliary, though often spoken of as sphincters, are not normally in a state of extreme tonic contraction. They are under reflex control of the ciliary ganglion, being contracted by impulses from the oculo-motor nerve, dilated by impulses from the sympathetic.

3. The retina, the nervous and epithelial coat of the eye, consists of about two-thirds of a hollow sphere. Its external layer consists of hexagonal pigmented epithelium, formerly considered part of the choroid, and serving, even better than the pigmented connective tissue of the choroid, to prevent internal reflexion of light. The interior surface of the retina is covered with the delicate, transparent hyaloid membrane, which incloses the vitreous humor. The retinal vessels run in the most internal portion of the membrane; they are derived from the central artery of the optic nerve. The axis cylinders derived from the optic nerve, penetrate the retina, and turn outward in the layer of the retinal vessels to connect with structures forming the following layers, from within outward:

1. A layer of nerve cells.
2. The internal granuiar layer in connexion with the neuraxons of the cells of the first layer.
3. An internal layer of nuclear cells.
4. A narrow, external, granular layer.
5. An external nuclear layer consisting of smaller cells than 3.
6. The rods and cones, the end-organs proper, consisting of modified epithelium, similar to the rods of the organ of smell.

Thus, the vibrations of light must penetrate the entire thickness of the retina, except the external pigmented epithelium, before stimulating the end-organs of sight. The sensory impulse passes inward, through five modilying layers, before being turned over to axis cylinders, and again passes outward through the entire thickness of the retina, except the extnrnal epithelium, on its way to the optic nerve trunk. As nothing is known of the exact method by which vibrations of light are transformed into nerve-currents, except that it is assumed to be through the medium of a chemic change effected by the light, and as the functions of the different layers of the retina is unknown, no attempt will be made at a detailed histologic description.

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CHAPTER XLII.—DIOPTRICS.

The dioptric media are, literally, those through which we see. In other words, they are the transparent media lying approximately in the axis of the eye, through which rays of light pass to the retina. They are:

1. The cornea, including the especially delicate and transparent epithelium of the central part of the ocular conjunctiva.

2. The aqueous humor, a physiologic salt solution, with small proportions of organic matters, filling the anterior chamber of the eye, i. e., the spheric segment between the cornea in front and the ciliary process and lens behind. The iris floats in this chamber, separating it into anterior and posterior portions.

3. The crystalline lens is composed of long, transparent, hexagonal, epithelial cells, arranged somewhat concentrically, and derived from an infolding of external epithelium of the embryo. Ii is bi-convex, more convex anteriorly than posteriorly, and is inclosed in an elastic capsule. It is of about the consistency of stiff animal jelly.

4. The vitreous humor, so-called from being of the consistency of molten glass, consists largely of mucoid material. It is inclosed in:

5. The hyaloid membrane, which covers the whole posterior chamber of the eye, including the posterior aspect of the lens.

The dioptric media, being necessarily transparent, are not provided with blood vessels, but are nourished by osmosis from adjacent structures. The humors, especially the aqueous, can scarcely be considered tissues. The other dioptric media are poorly nourished, are prone to senile degenerations, and do not tend to perfect repair after injury. Corneal ulcers and wounds are usually followed by permanent opacities. Degeneration of the lens is known as cataract, and is a common cause of blindness in old persons.

While rays of light traverse a homogeneous medium in a straight line, they are refracted, that is, deflected at an angle, on entering a different medium. Thus, in passing from the air and through the various diopteric media, there is a series of refractions. However, the total refractive error is not very important.

Bundles of rays emanating from different points of an illuminated object, cross one another in passing through a small aperture to a screen. Thus, the retinal image of an object is inverted. This inversion is frequently attributed to the lens, but the same inversion takes place in an eye from which the lens has been removed, as well as in any camera obscura without a lens. The fact that we do not see things upside down, has been explained on the hypothesis that, from constant custom, we associate the lower part of the retina with objects above, and *vice versa*. As a matter of fact, ideas of direction are quite unconnected with definite parts of the retina. The eyes are commonly used with the vertical line of the face varying 45 degrees either way from the perpendicular. Even in reading with the face nearly horizontal, we usually hold the book so that the page is vertical absolutely, and not relatively to the position of the eyes. With the head upside down, it is only for a moment that we are conscious of a sense of the inversion of objects.

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In passing through a double convex lens, the rays of light are focused by each surface of the lens, so that a small inverted image of the object from which the rays are reflected is formed behind the lens at a distance, which varies inversely with the distance of the object. This distance being the same, the focal distance is shorter as the lens is more convex. Objects at a distance of six meters may be considered as practically at infinity, since the rays of light reflected from them are almost inappreciably out of parallel. With the normal human eye, parallel rays are focused on the retina without muscular effort. In old age, the lens becomes relatively inelastic, so that it is difficult to focus near objects. The hypermetropic eye, from causes vaguely understood, is too short, so that rays of light from near objects would come to a focus behind the retina, even with the greatest possible convexity of the lens. Hence, it becomes necessary to reinforce the lens with a convex glass. Myopia is due to elongation of the eye-ball, so that with the least possible convexity of the lens, only objects at a small distance, a few feet or inches, according to the degree of deformity, are clearly seen, parallel rays being focused in front of the retina. This error is corrected by wearing concave glasses which refract the rays of light, so as to oppose the action of the lens.

Focusing is normally accomplished by the action of the ciliary muscle, in connexion with the elasticity of the lens and its capsule. Contraction of the circular ciliary muscle allows the lens to assume a more convex shape, and thus to focus near objects. For the normal eye, ciliary contraction is necessary for all objects within six meters of the eye. For the near sighted eye, this distance is more or less diminished.

Thus far we have considered eyes, all parts of which would yield perfect circles on cross-section. If any dioptric tissue is out of true, the vision will be far or near-sighted in some parts, usually meridians, as compared with others. The internal dioptric media, being supported by the even pressure of the fluids of the chambers of the eye, seldom become distorted while the cornea, which is subjected to the unequal pressure of the lids and to the contraction of inflammatory connective tissue from slight traumatisms and irritations, is very likely to become depressed in certain meridians, and bulging in others, usually at right angles to the former. This condition is called astigmatism. It is frequently associated with hypermetropia or myopia, if indeed, it is not caused by reflex attempts at focusing by contraction of the lids, which result in deformity of the conjunctiva. It is corrected by the use of cylindric glasses, which are convex or concave, as the case may require, and in the meridian requiring correction.

CHAPTER XLIII.—IRIS AND RETINA.

The iris, from which the iris diaphragm has been imitated, serves to regulate the amount of light entering the eye. An excess of light, or a corresponding sensitiveness of the retina or brain center, causes reflex contraction of the iris of both eyes, even if the stimulus is one-sided. Drugs which contract or relax smooth muscle elsewhere, have the same action on the iris and ciliary. The iris normally contracts reflexly as the eye is

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focused for near objects, dilates as it is focused for distant objects. Spheric and chromatic aberration are necessarily greater for the periphery of a lens, and are relatively greater, as lenses become more convex. In examining near objects, closer attention to details is necessary, and the lens is more convex. Again, the number of rays of light reflected from a near object that reach the eye, are greater than from a distant object, so that for the latter, the eye cannot afford to sacrifice slightly divergent rays that would be excluded by contracting the pupil.

At the entrance of the optic nerve, a little to the inner side of the eye, the retina is lacking in end-organs, so that rays falling on this spot make no impression, and it is called the blind spot. Owing to the crossing of the rays of light at the pupil, the blind spot causes an imperfection in the outer and middle part of the field of vision. Partly because this part of the field of vision is not of importance for close observation, partly because we usually employ both eyes at once, so that one compensates for the blind spot of the other, the blind spot is rarely noticed. It can be located by holding two small objects, one directly in front of the eye, the other at an angle of about 30 degrees, both being at a distance of about a foot. On moving the second object horizontally, the blind spot can be readily located.

On looking at the sky, especially through two or three thicknesses of blue glass, or by looking through a microscope which is out of focus, small discs come into view from the center of the field of vision, and radiate in all directions at a moderate speed. These represent the shadows of blood corpuscles thrown on the retina, and their course is due to their entering through the central artery of the optic nerve. Some observers can even distinguish red and white cells in this way.

Variously shaped translucent objects moving in the field of vision, are due to opacities in the humors, or to particles of mucus, etc., in the tears. These are called muscæ volitantes. Those which seem to move from below upward are usually on the conjunctiva, the apparent motion being the reverse of the true.

Just as the touch is more acute in the finger tips than in the skin generally, while sensations of temperature are less acute, so the center of the retina is occupied by the "yellow spot" in which vision is most acute for form, while color is relatively ignored. The yellow spot contain cones, but no rods, hence it is supposed that the former deal with form, the latter with color. It is impossible to distinguish objects which occupy less than about one half minute of arc, with the eye as a center, and this corresponds to about two microns of the retina, which is the diameter of a cone. Thus it is supposed that the stimulation of each cone gives rise to the sensation of a point, and that the alternation of light and shadow forming images on the retina, stimulates a fine mosaic of cones from which sensations of form are derived.

Vision is caused by an instantaneous stimulation of the retina, as by a flash of lightning, so brief that a rapidly moving object appears at rest. The sensation persists, however brief the stimulus, for about one-eighth second. Thus, if different stimuli occur at shorter intervals than one-eighth second, a blur is produced. For instance, a point of light moved

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through the air appears as a continuous line, and the spokes of a wheel moving with even moderate rapidity are not seen separately. By the cinematograph, a series of very brief stimuli, separated by periods of darkness, are given. Corresponding parts of each image fall on the same part of the retina, except that each picture differs from the preceding, as the position of the objects at the time of the photograph differed from that at the time of the preceding photograph. Thus, the change of stimulation of the retinal mosaic is comparatively slow, and we seem to see a continuous movement.

Analogously to what has been noted of other senses, a certain relative difference of stimulation is necessary to enable us to distinguish differences in brightness, and when a certain degree of brightness is reached, we can no longer distinguish differences. The greater the contrast between the stimuli applied to different parts of the retina, the more sharply are differences recognized. Black objects represent parts of the retinal mosaic which are not stimulated at all, or only very slightly, absolute black being the absence of light. White, which is the blending of all possible shades of color, stimulates the retina most markedly, and as the stimulation tends to spread to surrounding rods and cones, white objects appear larger than black ones of the same size, and from slight internal reflexion, the brighter an object is illuminated, the larger it seems.

If the retina is strongly stimulated for some time, as by looking at a light, the stimulus persists after closing the eyes or turning them to a blank wall, constituting the positive after-image. After a few moments, or immediately, if the previous stimulation has not been too strong, the rods which have been stimulated cease to convey impulses to the nerve fibres, while those of the same area that have been resting, pass into a state of active function, and produce a negative after-image.

Light rays consist of vibrations, the line from trough to crest of the waves being transverse to the line of progress, instead of parallel, as in the case of sound. As in the case of sound, there are rays identical with those of light, both above and below the limits of visibility, and by these, photographs can be taken so as to map out a spectrum far in excess of that which can be seen. Light waves travel about 196,000 miles per second, the lowest red rays vibrate 394 billion times per second, the highest violet rays, 760 billion times. According to the analogy of sound, our sensations of light are limited to less than one octave. According to the rapidity of vibration, different colors are distinguished, and it is said that an eye of average delicacy of perception can distinguish 20,000 shades. The older writers recognized seven primary colors, which are arbitrary divisions of the color scheme. These are red, orange, yellow, green, blue, indigo and violet. Modern authorities recognize only three primary colors, red, green and violet, and it is supposed that the rods of the retina are divided into three corresponding classes, sensations of intermediate or blended vibrations, being due to joint stimulation of two or more classes of rods. Just how light rays stimulate the rods and cones, is not understood, but it is probably by an intermediate chemic effect, perhaps on the pigment of the retina, but this pigment differs widely in quantity and kind in different

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animals. The blending of rays of light of all—or, practically, of many—rates of vibration, produces white light. Two colors are termed complementary when their sum is white, i. e., when a mixture of their component rays produces white light. If one color is simple, the other must be very complex. For practical purposes, complementary tints may be calculated from the seven, or even three primary colors. Thus, the complementary color of red, is green with a shade of violet. Violet and orange are complementary colors, purple and greenish yellow, etc. Complementary colors may readily be determined experimentally by means of the negative after-image, produced after tiring the eye with a colored light. In all experiments with colors, it should be understood that the only pure colors are those produced by breaking up white light by a prism, pigments containing dirt and other impurities, for which wide allowances must be made. In fact, pigments have no color except that of reflected light from some luminous source. A red pigment absorbs all vibrations except those of such a rate of vibration as to give the sensation that we call red. No pigment allows such clear-cut distinctions to be made as can be obtained by decomposing white light with a prism, and all have a slightly different shade, according to the nature of the reflected light.

Color blindness, which is not very rare, probably depends on the lack of one or more classes of rods, so that certain colors are confused or look alike. In extreme cases, there seems to be no appreciaton of color, but only of form, light and shade, so that a landscape would appear in photographic tints, not those of a painting. Many persons, especially men, are supposed to be color-blind, simply because they do not know the names of colors.

CHAPTER XLIV.—VISUAL PERCEPTIONS—BINOCULAR VISION.

The sensations derived from sight arise directly from the stimulation of the retinal mosaic by patterns of various shapes, colors and illumination. The perceptions into which these sensations are translated, by the brain centers, represent, not a pattern on a curved surface, but the location of objects in space and possessing size, absolute and relative, distance, solidity, etc.

Vision is ordinarily binocular, both the internal and external muscles of both eyes acting in harmony, even if one eye is covered. The four straight and the two oblique muscles of the orbit are controlled by motor centers previously mentioned, so that the axes of both eyes are normally directed toward the object on which the attention is concentrated. The nearer the object, the greater will be the convergence of the optic axes, while for remote objects, such as the moon, they will be practically parallel. To some degree, perceptions of distance are due to the muscular sense connected with the movements of the eye-balls, there being an approximate triangulation, with the distance between the eyes as a base line. Obviously, however, when the distance exceeds a hundred feet, the angle changes imperceptibly. It is self-evident that the retinal space occupied by the image of an object varies directly, according to the size, and indirectly

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to the distance of the object, barring the effect of alterations of the convexity of the lens in focusing. Thus, objects of about the same size, as men, have retinal images of nearly fixed dimensions for given distances, and by practice, the distance may be quite accurately estimated. This, indeed, is part of the training of the soldier. If the guess as to the approximate size of an object is correct, the distance may be estimated, otherwise not. In localities similar to those with which we are familiar, there are so many different kinds of objects, houses, trees, animals, etc., that an unexpected departure of one or another from the average size would be detected, perhaps subconsciously, by comparison with other objects, so that we would not be greatly deceived as to distance. But, in an unfamiliar country, great errors in judging distance are likely to occur, because of the difference in the size of trees, animals, buildings, etc., somewhat resembling in form those with which we are familiar. A massive building of simple architecture, and so situated that it cannot readily be compared with trees or other buildings, frequently causes disappointment, because we form a perception of it as a rather small building at a greater distance. The absence of intervening objects renders the apparent distance less than when we can mark off approximate distance by blocks, or by measuring with the eye from one landmark to another. Obviously, if the distance seems shorter, the object is conceived of as smaller than it actually is. Such errors are frequent in the case of those unfamiliar with the ocean or with long stretches of plain, a large ship appearing as a small boat at a shorter distance, or a remote mountain as a near-by hill. Long distances are judged to a considerable degree by the distinctness of vision, according to the common observation of the haze noticeable in looking through air. If the air is clearer than that to which we are accustomed, the object appears nearer and smaller. In a fog, on the contrary, a small object near by, is interpreted as a very large object at a distance. To a certain degree, distance is judged, especially in monocular vision, by the muscular sense connected with the ciliary muscle, in the act of focusing.

Solidity is often stated by physiologists to be appreciated only by binocular vision. In looking at near objects, the images on the two retinæ are distinctly different, and on account of the overlapping of the mental perceptions, we can literally see more than half way around a small solid object, and thus convince ourselves of its solidity. The stereoscope is an apparatus by which each eye is directed at a picture of an object taken from the corresponding side and the overlapping of the mental images—the pictures being usually taken so as to exaggerate this phenomenon—gives the impression of solidity. By reversing the point of view from which the pictures are taken, a solid object appears as a hollow cast of itself. It is obvious that, if the diameter of an object is greater than that of the pupil, we cannot see half way around it with one eye; also that if the diameter of an object is greater than the distance between the optic axes, we can not see half way around it even by using both eyes. For a large distant object, like the moon, it is obvious, not only that we can never see half way around it at one time under any circumstances, but that the overlapping of the retinal images of the eyes must consist in the application of

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two images that differ from each other inappreciably. But it is a matter of everyday experience that we can distinguish solid from flat objects, with one eye, provided that there are differences in illumination, so that different parts of the object differ in light and shadow. These lights and shadows change, as the source of illumination or the point of view changes, and, thus, it is impossible to imitate them on a flat surface. However, by a sort of instinctive courtesy, we recognize even crude and conventional attempts to suggest light and shadow as portrayals of solidity. If the coloring is good, and the imitation of light and shadow is quite accurate, and the picture is so placed that we cannot see it except from the point of view from which the reflexion of light and shadow was originally taken, if moreover, the perspective is exact, we may be deceived into believing the picture to represent solid objects. By perspective is meant the correct delineation of relative size, for the distance intended. It often happens in mechanical drafting that we may assume the source of light to be in either of two directions, the light and shaded areas of the picture being so arranged that we may interpret them in either of two ways. Thus, a pile of solid blocks may be made to appear as the lower, hollow, aspect of empty boxes, if the attention is fixed on another part of the picture. If light is evenly distributed from all directions, and is either very dim or very intense, so that distinctions of light and shadow fail, it may be difficult to distinguish a solid object from a flat surface. Thus, the sun and moon usually appears as discs.

Blood Dyscrasia.—Under the above title the value of Ecthol as an antipurulent has been very ably presented in a recent brochure from Battle and Company of this city. Echinacea has long been held in high esteem by the Eclectics and it is quite evident from the many witnesses in this little book that it is fast gaining admirers in the Regular fold. The combination of the active principles of echinacea and thuja, in other words ecthol, merits a trial. It is indicated wherever there is dyscrasia of the secretions, or where there exists a tendency to tissue disintegration or blood poisoning.

The Home Modification of Cow's Milk.—The Mellin's Food Company has recently published an attractive little volume under the above title, it deals with the scientific and intelligent phases of infant feeding and contains a mass of information which must prove exceedingly valuable to the profession. The book is handsomely gotten up, both the printer and the illustrator have assisted in making it a thing of beauty—and beauty, even in a book, is pleasing to a medical man. Add to it real scientific worth, such as we have in this instance, and popularity is assured. A request to the Mellin's Food Co., Boston, Mass., will bring it.

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Reports on Progress.

COMPRISING THE REGULAR CONTRIBUTORS OF THE FORTNIGHTLY DEPARTMENT STAFF

GENERAL SURGERY.—C. E. Black, M. D., Jacksonville, Ill.
DISEASES OF THE CHEST—W. W. Bulette, M. D., Pueblo, Colo.
INTESTINAL AND RECTAL SURGERY—S. G. Gant, M. D., New York City
DISEASES OF THE MIND—Frank C. Hoyt, M. D.
RHINOLOGY AND LARYNGOLOGY—John A. James James, M. D.
GENITO-URINARY SURGERY AND SYPHILOLOGY — Bransford Lewis, M. D.
OPHTHALMOLOGY—J. Ellis Jennings, M. D.
ORTHOPEDIC SURGERY — Phil. Hoffman, M. D.
GYNECOLOGY—Josephine Milligan, M. D., Jacksonville, Ill.
OBSTETRICS—R. B. Murphy, M. D.
MEDICINE — Frank Parsons Norbury, M. D.
CLIMATOLOGY—Hubert Work, M. D., Pueblo, Colo.
PATHOLOGY AND BACTERIOLOGY—Rutherford Gradwohl, M. D.
PARIS CORRESPONDENT — Thomas Linn, M. D., Paris, France.
NEW YORK CORRESPONDENT — E. Franklin Smith, M. D.
LONDON CORRESPONDENT — R. T. Hewlettt, M. D., M. R. C. P., Chief Bacteriological Laboratory, Jenner Institute of Preventive Medicine, London.

GYNECOLOGY.

IN CHARGE OF DR. JOSEPHINE MILLIGAN,

JACKSONVILLE, ILL.

The Early Diagnosis of Uterine Cancer.—Joseph Wiener (*Am. Jour. of Obstetrics and Diseases of Women and Children*, December, 1899) urges the necessity of early diagnosis of uterine cancer by the aid of the microscope. He says that there are no symptoms that are pathognomonic of cancer of the uterus. When there are pain, discharge and hemorrhage it is almost surely too late to operate. A majority of the cases are found before the menopause, and a number during the earlier years of sexual activity, and more rarely in old age. It develops in virgins, in nultiparæ, as well as in multiparæ; it rarely develops from a cervical tear, and frequently develops from a chronically inflamed endometrium. Overwork, mental worry and poor food play some role here as in the development of cancer in other parts of the body. To arrive at an early diagnosis, inspection and palpation with or without an anesthetic simply gives an idea of an enlargement, and a diagnosis should be made before such enlargement take place. Dilation of the uterine cavity and exploration with the finger gives only the location of the ulceration if any exists. A sharp curette should be used to procure scrapings after a dilatation of the uterine canal. These scrapings must be distinguished from 1. Endometritis, glandular or interstitial. 2. Necrotic myomata. 3. Polypi. 4. Placenta retenta. 5. Abortion. A careful diagnosis of these scrapings will prevent a healthy uterus from being needlessly sacrificed, and by removing a diseased organ in time prevent a useful life from being lost. The reason of the high mortality of uterine cancer is that an early diagnosis and early operation are not made.

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Abdominal Hysterectomy at 79.—J. F. Baldwin (*Phila. Med. Jour.*, December 9, 1899) reports an uneventful recovery of a patient of 79, after an abdominal hysterectomy for sarcoma of the fundus of the uterus.

Technique of Abdominal Hysterectomy.—J. H. Carstens (*Am. Jour. Obstetrics and Diseases of Women and Children*, November, 1899) draws the following conclusions for the operation of abdominal hysterectomy: 1. Clamp the broad ligaments and remove the growth and uterus. 2. Ligate the four blood vessels separately. 3. Cover all raw surfaces with peritoneum. 4. In cases without tears and healthy mucous membrane, leave in the cervix. 5. In any diseased condition of the cervix and malignant growth, perform total hysterectomy.

Hemostasis in the Tubo-Ovarian Pedicle.—T. B. Eastman (*Am. Jour. of Obstetrics and Diseases of Women and Children*, November, 1899) prefers silk to catgut ligatures in pus tube cases, because of its greater tensile strength and security of the knot of the silk; but he considers catgut the ideal ligature for non-purulent cases in the hands of an expert operator. The angiotribe represents a step in the right direction, but is not yet perfected. The advantages of the electro-hemostat are: It does not put the broad ligament on a severe strain, giving rise to pain; it does not press on a sensitive nerve, causing pain, for the nerves are devitalized; it does not allow a Fallopian tube to become patent with its resultant secondary inflammation of the stump and formation of adhesions.

The Saturation Method in the Management of Laparotomy.—Stewart Lewis (*Phila. Med. Jour.*, December 9, 1899) lays down the principle that in laparotomy drainage of the tissue fluids is an unavoidable evil. It predisposes to shock, tends to limit absorption, metabolism and excretion, and tends to produce unpleasant symptoms, so should be provided against and limited, and methods of restitution made. To prepare a patient for laparotomy. I. The intestinal canal should be empty as far as possible; to secure this eighteen hours previous to operation two or three grains of calomel are given at once, or in divided doses and combined with some chalogogue. Six hours previous four quarts of normal saline should be given by enema, the patient being in the Sims position, and retained as long as possible; no saline cathartic is given. II. The tissue should be saturated with fluid to the physiologically limit; the above preparation of the intestinal tract does not drain the tissue fluids by salts, but the normal saline enema reinforces them; the fluids are to be further increased by copious draughts of water, six to eight ounces every two hours for forty-eight hours before operating. After operation, before the anesthetic is withdrawn, the patient receives one quart of saline solution as an enema; this can be repeated hourly, if indicated. As soon as ether vomiting ceases hot water should be given in quantities large enough to reach the stomach hot. The advantage of this "saturation method" are: 1. Better morale of the patient. 2. Shock is lessened. 3. Headache, excessive thirst and wiry pulse are rare. 4. The urine is increased in quantity and specific gravity lessened, irritable bladder is unknown, and post-operative nephritis almost so.

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Parotid Gland Extract in Treatment of Ovarian Disease.— E. P. Mallett (*New York Medical Journal*, August 26, 1899) gives the following conclusions after using the parotid giand extract in twenty cases of ovarian dysmenorrhea: I. Parotid gland extract relieves the pain of dysmenorrhea in all cases, regardless of cause, better than any of the so-called uterine sedatives. II. It relieves dull aching pains referred to the back and ovarian regions. III. Menstruation becomes more regular as to periodicity, less in amount and shorter in duration. IV. During its exhibition, pelvic exudate softens and becomes absorbed more rapidly under abdomino-pelvic massage. V. The general health, strength and spirits improve and dull headaches are relieved or disappear. VI. The counter-indication is in cases of artificial climactoric. The flashes of heat and cold are more frequent and severe if the extract is exhibited.

Parotid Gland Therapy in Ovarian Disease.—J. B. Shober (*Am. Jour. Obstetrics and Diseases of Women and Children*, September, 1899) reports nine cases of ovarian disease treated by parotid gland extract with marked benefit. In general, the cases showed symptoms of constant discomfort, and severe pain in the ovarian region that was worse a few days before the menstrual period—the period was often irregular, either free or scanty, usually with severe dysmenorrhea; the pain radiating to the bladder, rectum, sacrum, hip, and down the affected side. In these cases the ovary or ovaries were enlarged, tender, prolapsed and adherent; but there was no extensive inflammatory disease, nor were the tubes extensively involved, nor was there much exudate. The results were that the pain was relieved, the ovaries became smaller and lost their sensitiveness, and the menses became regular and less painful. These results agree with those reported by Dr. E. P. Mallett.

The Formative Period of Uterine Fibroids.—Grace Peckham Murray (*Medical Record*, December 2, 1899) gives the following suggestions and conclusions on the formation of uterine fibroids: 1. The probability of determining clinical symptoms which would lead to a recognition of a formative period of uterine fibroids that might suggest a preventive treatment. 2. That the predisposing causes of race, age or condition count for little. 3. That chronic inflammatory conditions of the endometrium, uterine parenchyma, and of the ovaries and tubes are powerful predisposing causes; and that there is a direct relation between the hyperplasia of the uterus and the formation of fibro-myomata. 4. That extreme disturbances of the nervous system precede and accompany the formation of fibroids. 5. That the evolution of the fibroid from fibromatous centers when it begins to take on growth is rapid, and the age of the growth cannot be told by its size. 6. The possibility of curettage as a predisposing cause for these tumors, by injuring the blood vessels, and thus concentrating the blood supply. 7. Keiffer's experiments show that the blood supply being cut off from the uterine tissue, that this tissue then becomes condensed into whorls of fibrillæ, afterwards developing into fibroids that obtain their blood supply from the surrounding uterine tissue. The tissue of the tumors is like normal tissue, except the concentric arrangement of fibrillæ.

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Ventral Fixation of the Uterus Without Laparotomy.—F. Suggs (*New York Medical Journal*, December 9, 1899) has perfected a suture carrier, so that ventral fixation of the uterus can be readily done through the vagina. A posterior incision is made, uterine adhesions are broken up, the ovaries and tubes are treated as indications demand. The fundus is brought down backward through the opening in the vaginal vault; two silk worm gut sutures are placed in the uterine wall, and the surface scarified; artery forceps catch the ends of the sutures and the uterus is returned to the peritoneal cavity. The patient is raised to the Trendelenberg position. The carrier is a long curved cannula with a strong, flexible trocar that can be thrust out several inches beyond the bulb-pointed cannula, and having an eye near the point. The point is projected from the bulb and two ends of a long piece of medium silk are threaded in the eye, and the point is drawn back into the cannula; this leaves a free loop hanging down by the instrument; into this loop is placed one of the silk worm gut suture ends that are in the uterus and twisted. Two fingers are directed upward and forward through the vaginal incision toward the abdominal wall, that can be reached if pressure from without is made; the bulb-ended suture carrier is made to follow along in front of the fingers to the abdominal wall, then the needle is thrust through, carrying the silk with it, it is then unthreaded, and in its turn draws the silk worm gut through. The three other suture ends are drawn through in like manner, and the opposite ones tied together over a small piece of gauze. This carrier makes possible a simple vaginal incision for a ventral fixation of the uterus.

The Operation for Complete Tear of the Perineum.—H. A. Kelly (*Am. Jour. Obstetrics and Diseases of Women and Children*, August, 1899) gives two modifying improvements of his previously described operation for complete tear of the perineum. 1. To avoid a rectal wound, an incision is made across the recto-vaginal septum one or more centimetres above the margin between the rectal and vaginal mucosa, this incision extends above and beyond the sphincter ends, taking this incision as a base line the vulvar and vaginal rents are operated on as usual; the rectal is reached by dissecting down an apron-like flap, exposing the internal sphincter muscle, care being taken to avoid button-holing the rectum, at the sides of this flap the external sphincter ends are caught up sutured with catgut. This apron of tissue, whee the sutures are in place, projects out of the anal orifice and points away from the impact of fecal masses, i. e., there is no wound on the rectal surface, hence danger of infection is lessened. These sutures are to be tied at the end of the operation. 2. To avoid the presence of a dead space in the center of the septum, three or four catgut sutures are applied in the form of the figure 8; beginning above, each suture grasps the fibres of the internal sphincter well to one side of the median line, then is carried to the opposite side, then through the tissues in the septum above the internal sphincter, it then returns to the first side, including the corresponding area of tissue, and is finally brought out through the internal sphincter at a point corresponding to the point of entrance. These buried sutures do away with dead space and approximate broad, plain surfaces, instead of a thin line of union. Dr. Kelly reports twelve new cases of repair of recto-vaginal septum with excellent results.

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BRAINARD DISTRICT MEDICAL SOCIETY.

STENOGRAPHICALLY REPORTED FOR THE MEDICAL FORTNIGHTLY.

The Society met January 25, in Jacksonville, Ills., at the rooms of the Morgan County Medical Society, President Coppell presiding. Members present during the day were Drs. Adams, Burnham, Black, Crouch, Duncan, Hairgrove, Norbury, McLaughlin and Pitner, of Jacksonville; Fisher and J. W. Newcomer, of Petersburg; Hurst of Greenview; Hole, of Tallula, Kreider, of Springfield, and Miller, of Lincoln.

Visitors were Drs. W. C. Cole, E. Bowe, C. C. Peters, Josephine Milligan, Harvey Milligan, Anna McF. Cromwell, C. C. Cochran, of Jacksonville; Vertrees, of Murrayville; Smith of Roodhouse, and Harvey of Griggsville.

Drs. Helen Duncan, of Jacksonville, a graduate of the Woman's Medical College of Chicago, Class of '97, Elmer L. Crouch of Jacksonville, a graduate of Missouri Medical College, and W. K. McLaughlin, a graduate of Chicago Medical College, Class of 1890, applied for membership, and were duly recommended by the Censors and elected. After the transaction of routine business, the subject of the bills now before Congress to control vivisection in the District of Columbia were discussed. The opinion was unanimous that these bills are unequal and injurious in their import, and a committee, consisting of the President, Secretary and Dr. F. P. Norbury, Chairman, was appointed to draft resolutions to be reported to the Society at the afternoon session.

Dr. Black, for the Committee on Microscopy, spoke of the need of the establishment of laboratories even in small cities for microscopical and bacteriological diagnosis. Every day impresses more and more the value, even the necessity for using these methods in the study of cases. It is impossible for the busy practitioner to use them efficiently for himself, and the delay unavoidable, if a specimen must be sent to some remote point, greatly interferes with the value of the results. Many might be examined and a definite report obtained in a few hours if the means were at hand, and thereby much time be saved for both patient and physician, which is now lost in a sort of careful and anxious experimenting. These laboratories should be established and supported by the fees of the people benefited, as drug stores are now, examinations being prescribed by the physician. The whole structure of modern medicine and surgery is based on laboratory knowledge and the knowledge of cell changes.

Such laboratories might be supported by the state or municipality. The state university is already doing a little work in this line, making examinations of water, and our tests show that there are very few wells in Jacksonville that are safe for use. We should have a laboratory in every county at least. The patient or the municipality receives the benefit and should foot the bill. We are often chagrined by failure, more or less complete, in our management of cases, where the use of laboratory methods would have made our way plain and easy.

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DR. HURST.—We should be obliged to pay the bills ourselves in most cases. It will be a long time before every county can boast its pathological laboratory, but every general hospital should have these facilities, and this department might be well supported. It is a good thing for the community to have these things. Recently near Athens there were cases of sore throat which were decided by a microscopist not to be diphtheria. Two families moved to Greenview and here the children became very ill and three died with the disease. At first they were not quarantined, but later were isolated.

DR. MILLER.—The suggestion of Dr. Black is an excellent one. We are all at times hampered in our treatment of cases by an uncertainty as what is the exact condition, as in diseases of the kidneys or in throat cases without visible membrane. To wait three days for a report, as we must now, is often to have it too late to secure the best results from the treatment adopted in view of the findings, or on the other hand, to have the expense rendered useless by the progress of the disease making diagnosis easy without such aid. A prompt diagnosis in malarial troubles of an obscure nature would be very helpful, and typhoid might be earlier recognized with certainty and more successfully treated.

A paper on "Extradition of the Blind," by Dr. J. Whitefield Smith of Bloomington, was read, in the absence of the author, by the Secretary. (See page 137, MEDICAL FORTNIGHTLY, March 10.)

Discussion.—DR. ADAMS.—We are getting to realize that there may be "fields" for all the senses as there is a "field of vision." Dr. Oliver is working out the data as to the "field of hearing" and thinks it may be possible to diagnosticate disease of the auditory nerve by examination of the field of hearing.

A boy at the Asylum for the Blind here has the power mentioned by the writer, of recognizing objects without touch; for example, he will pass through a doorway accurately, touching neither side even if special efforts are made to confuse his knowledge of the exact location of the passage.

DR. NORBURY.—This is an excellent paper on a very interesting subject. I move that the Society express its appreciation of it by a vote of thanks. (The motion was unanimously carried.)

As to this power of locating the position of near objects, one of the teachers at the school here, himself absolutely blind, has the power, but attributes it to a nice sense of hearing. He goes about freely even in strange places and never meets with accidents. He recognizes inequalities in the sidewalk and walks with confidence.

DR. PITNER.—We all have felt the sense of nearness of solids, as the wall, chairs, etc. This is probably through the sense of touch. Possibly waves set in motion by ourselves are reflected from the solids near and so felt. As we go into a dark room we recognize the presence of objects, chairs, etc., and people of ordinary acuteness seldom run against such things unless their mind is fixed on something beside getting about safely.

DR. HURST.—There is much to learn about these things. Observation of blind animals may help us. Horses keep the road well in the dark, a

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blind horse as well as a seeing one. They will not run against a fence. A man blown up in a mining explosion had his sight totally destroyed. He survived and lived near my office for a year. He would sit out doors and recognize when any one passed, even when I could not hear a sound of footsteps. When walking along the sidewalk he would stop several feet from a person who might be standing before him and demand to know "who is there?" He recognizes the presence of persons more readily than inanimate objects. He could "feel" a person ten feet away. He is gradually losing this power while distinction by hearing becomes more acute.

DR. COPPELL.—In the *N. Y. Med. Journal* some time since a case was reported from Memphis, Tenn., of a man born blind who had this sense in a high degree. Late in life an operation gave him his sight, and he gradually lost this power. Probably most of us have this power, but do not have occasion to rely upon it and do not recognize it.

DR. ADAMS.—It has seemed to me that horses keep the road through the sense of touch with their feet.

A paper with report of cases of Sympathetic Ophthalmia was read by Dr. A. L. Adams. The latest ideas as to the etiology were mentioned and the importance of early diagnosis and treatment were emphasized; data showed that an early removal of the injured eye would often control the tendency to inflammation of the other eye, while in neglected cases it might be wise to consider whether the sympathetic eye is not the one to remove if the injured eye is quiescent and retains some measure of light-perception. These cases ought to come to the specialist at an earlier stage of the trouble.

Discussion.—DR. HURST.—It is no unusual thing for the general practitioner to refer these cases to a specialist only to have them refuse to go.

DR. NEWCOMER.—We ought to make a careful study of such cases in order to be able to detect the need promptly and send them to the specialist for treatment. It is impossible for the general practitioner to be well equipped to treat all these cases.

DR. BLACK.—In a recent case which I had diagnosed as gonnorrheal ophthalmia and sent to a specialist for treatment, the eye was cured and my diagnosis reversed.

In closing DR. ADAMS said, I do not wish to be understood as bringing complaint against all general practitioners; but the position of the family physician is very important, and he often fails to insist on the importance of the early symptoms.

DR. F. J. SHIPP, of Springfield, reported a peculiar case of cutaneous hyperesthesia with severe neuralgic pain, which after long use of various remedies was finally cured by persistent massage skilfully applied in the form of glow baths, with a selected diet, from which the heavier meats and vegetables were excluded, together with all bread preparations except whole wheat bread. Drink: Imperial was used after each meal.

[TO BE CONTINUED.]

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Orthoform in the Treatment of Epithelioma.—The following case is reported to show the effects of the valuable addition to our local anesthetics, orthoform, in the treatment of epithelioma. The patient is a lady aged eighty-six, who for several years has been troubled with arterial degeneration (arteria-sclerosis) and who came to me for treatment of the mental and nervous affections growing out of this senile change. At the time that I saw the patient I noticed an epithelioma on her forehead, which had then just begun to break down. The ulceration gradually extended as above stated, by induration of the base, which was marked by hard edges, waxy and nodular growths just beneath the skin. As the ulcer extended it undermined the adjacent tissue, and as it broke down the edges were decidedly irregular. The granulations bled easily and the sore was covered with a dark brown crust which when removed showed the crater-like cavities of the ulcer. This form of epithelioma is called, by Hutchinson, the "crater form ulcer." By reason of the patient's age and the fact that she had this arterial degeneration, I did not feel justified in curetting the ulcer, knowing its liability to return and that irritation would only intensify it. Further I remembered that while working in Shoemaker's Clinic in the Philadelphia Hospital for Skin Diseases, in 1887, I saw many cases of epithelioma, and had impressed upon me many times the fact, as stated by Shoemaker, in his Clinic and reiterated in his text book that degenerative processes once initiated in the very aged tend to continue, and removal of the epitheliomatous lesions in such patients does not usually arrest the progress of the disease. On the contrary, it stimulates by irritation and often causes it to more speedily spread, hence my treatment has been confined to keeping the ulcer clean by daily dressing with peroxide of hydrogen and with a local antiseptic ointment, also an occasional application of a weak citric acid lotion. By reason of the pain which the patient experienced and which in recent months has become more intense, it became necessary to consider the question of local anesthetics, and I had presented to my attention orthoform, which as a local anesthetic and antiseptic, came to recommend itself as a very suitable dressing in such cases. The patient experienced a lancinating pain when the ulcer was being dressed and at night a burning gnawing pain which tended to keep her awake. I began the use of orthoform, and within the first twelve hours the patient seemed to be relieved of these excruciating pains. She had a good night's rest and has continued to have undisturbed sleep since the use of orthoform began. It gives satisfaction in keeping the wound clean: it tends to overcome that foetid odor and to relieve the pain. There is no stimulating or poisonous effect apparently from the use of the drug, and consequently I feel that it is an important addition to our antiseptic and local anesthetic agents. The anesthesia is complete and of long duration. I use the crude power applied locally over which the usual dressings of gauze are made. These dressings are removed daily. While I do not expect to even arrest the growth of the epithelioma, I have at least made it more endurable by relieving the pain; overcoming the odor and permitting the patient to obtain sleep. The physical health of the patient is very good, considering her age. F. P. N.

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MEDICAL MISCELLANY

ACCIDENTAL WOUNDS OF THE FEMALE BLADDER.

By Frederick Holme Wiggin, M. D., New York City.

M. H., unmarried, aet. 41, was admitted to the City Hospital, Blackwell's Island, N. Y., Sept. 30, 1898, suffering from a large myoma, which sprung from the anterior uterine wall and extended above the umbilicus. On Oct. 3, the abdomen was opened, and the tumor, which weighed seventeen pounds, was drawn through an incision six inches in length, freed from its attachments and removed, together with the body of the uterus amputated near the internal os. As hemorhage was profuse it became necessary to remove the mass very rapidly, to accomplish which the anterior attachment of the tumor was clamped and cut, when it was discovered, from the escape of urine, that the bladder had been opened near the fundus.

The general cavity had previously been shut off with gauze pads and thoroughly irrigated, followed by the use of Hydrozone in half strength, and this, in turn, by saline solution. The gauze pads were now changed, and the opening in the bladder, four inches in length, was closed by means of two layers of chromicized catgut sutures. The wound was then disinfected, and there being a large peritoneal flap, it was attached to the bladder and made to cover the line of sutures, thus making the bladder-wound extra peritoneal. After further washing out of the abdominal cavity with Hydrozone and the saline solution the external wound was closed, without drainage, and the usual dressings applied. The patient being feeble it was not thought advisable to make a vesico vaginal fistula to drain the bladder, but, instead, a self-retaining catheter was introduced. At the end of ten days, however, tumefaction occurred over the lower angle of the abdominal wound, and, on opening it, urine began to escape. A vesico vaginal fistula was now made in order to afford adequate drainage. The sinus in the abdominal wall was curetted and, after being thoroughly disinfected with Hydrozone, its walls were sutured. Soon afterward, the sinus having closed, the sutures which kept open the vesico vaginal fistula were removed, and the latter closed quickly without any further operative interference.

Journal A. M. A.

AN INJUSTICE. — Probably no drug has been more unjustly maligned than Erythroxylon Coca. Yet no drug has really rendered more aid to therapeutics, as demonstrated in the many writings by authors, botanists and medical observers during the past century. At the time of the Incas (twelfth century), long before the discovery of Peru by Pizarro (1524), Coca was in extensive use. It rendered the greatest of service as a restorative, a fortifier, a sustainer. It was entirely depended upon to insure resistence to disease, fatigue, hardships or toil. For centuries Coca proved its usefulness and merit; it so has continued, notwithstanding the systematic series of attacks instigated in the sensational press, about three years ago, by malicious persons who had special interests in endeavoring to bring Coca into disrepute, if possible to dissuade its use.

The fast-growing popularity of Coca through the untiring efforts of Mariani, of Paris, who was the first to introduce it in Europe and in America in a uniformly reliable and argeeable form, and his labor and serious work in this direction were appreciated by the medical profession.* His preparation has become a most formidable rival to the many so-called tonics, restoratives and stimulants.

When it was clearly demonstrated that Coca was vastly superior and was being adopted universally by the physician, each manufacturer hastened to add Coca in some form or another to their various mixtures. While this was an admission of the value of Coca, it really injured its reputation, owing to the defective preparations produced. Unsatisfactory, even harmful results induced the profession to reject the many valueless, at times dangerous, concoctions. An active campaign was opened against Coca in the medical and daily press. Sensational articles without any basis of fact were instigated, with the dual purpose of inciting the opinion of the physician and the public against the drug, and thus prevent its use.

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The manufacturers had no knowledge of the requisite treatment and preparation of this delicate, probably most volatile of plants—in fact, were unable to procure reliable leaves, there being even a vastly greater variation than in tea. Due to aforesaid causes, the manufacturers were either compelled to or voluntarily stopped the use of Coca, thus proving again the old saying, "the survival of the fittest," as, notwithstanding the combined efforts of the many competitors and antagonists, the well-known preparation of Coca by Mariani, of Paris, France, which bears his name, is the only one which has resisted all attacks directed against Coca.

Introduced to the profession more than thirty-five years ago, it stands without an equal, and continues to be endorsed and upheld by all who subject it to thorough test. It certainly merits the attention of practitioners who for any of the aforesaid reasons may have not considered Coca in its true light, or who may have become prejudiced.

Mariani's Coca can be conscientiously recommended; its adoption into practice as an adjuvant in treatment of the innumerable cases where an absolutely reliable tonic, effective but mild stimulant is indicated, will render more assistance than any drug or medium known to therapeutics.

Its field of usefulness will gain for Coca in the form of a reliable preparation, as great, or if possible, even a greater reputation in the future than it enjoyed at the time of the Incas.

COMPETITION FOR THE AMERICAN MEDICAL ASSOCIATION MEDAL.

At the meeting of the American Medical Association, held June 4, 1897, it was resolved to restore the former policy of the Association in favor of offering annually a gold medal for meritorious scientific work. The committee for this year, consisting of Drs. George M. Gould of Philadelphia, E. Fletcher Ingals of Chicago and T. W. Huntington of Sacramento, Cal., desires to direct attention to the following rules governing the competition:

1. The medal shall contain the seal of the United States or a seal of the Association, to be hereafter designed, on one side and an Esculapian staff on the other, together with the name of the recipient of the medal and suitable inscriptions.

2. The commercial value of the medal shall be $100.

3. A standing committee on prize medals, consisting of three members of the Association, shall be elected by the Business Committee as follows: One for one year, one for two years and one for three years, and thereafter one to be elected yearly to hold office until in either case his successor has been duly elected. In no case shall a member of the Business Committee hold a place on the Committee on Prize Medals.

4. The competing essays shall be typewritten or printed and shall bear no mark revealing their authorship; but instead of the name of the author, there shall appear on each essay a motto, and accompanying each essay shall be a sealed envelope containing the name of the author and bearing on its outer surface the motto of identification. No envelope is to be opened by the Committee until a decision has been reached as to the most deserving essay, and the other essays have been returned to their respective owners. The Committee shall have authority to reject and return all essays in case none have been found worthy of the Association medal. Competing essays must be in the hands of the Committee not later than March 1, 1900. For further information address any member thereof.

INTERNATIONAL CONGRESS OF MEDICAL ELECTROLOGY AND RADIOLOGY.

At the request of the French Society of Electro-therapy and Radiology, the International Congress of Medical Electrology and Radiology is connected to the International Congress of 1900. A commission composed of Professor Weiss, University of Paris, president; Apostoli and Oudin, vice-presidents; Professor Doumer, University of Lille, general secretary; Moutier, secretary; Boisseau du Rocher, treasurer, and of Professor Bergonie, University of Bordeaux; Professors Bouchacourt and Branly, Catholic Institute of Paris; Larat, Radiguet, Villemin, surgeons of the hospitals of Paris; has been asked to assure its organization. This congress will meet in Paris, July 27 to Aug. 1, 1900. For further information, address Prof. E. Doumer, general secretary, 57 Rue Nicolas-Leblanc, Lille.

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The Medical Fortnightly.

Issued Tenth and Twenty-fifth of Every Month by the Fortnightly Press Co.

UNDER THE EDITORIAL DIRECTION OF

FRANK PARSONS NORBURY, M. D. AND THOS. A. HOPKINS, M. D.

Secretary: CHARLES WOOD FASSETT, M. D.

A COSMOPOLITAN BIWEEKLY FOR THE GENERAL PRACTITIONER

Editorial Offices in St. Louis, Chicago, Cincinnati, Jacksonville, St. Joseph, Kansas City, and Pueblo, where specimen copies may be obtained and subscriptions will be taken.

Address all business communications to the Fortnightly Press Company.

Address all contributions and books for review to the Editors, Suite 312, Century Building, Saint Louis.

Volume XVII **APRIL TENTH** **Number 7**

Editorial Department.

Drainage of the Pleura.

IN THE sero-fibrinous pleurisy secondary to pneumonia, not infrequently the character of the effusion is such that it will not readily absorb. Even aspiration if required and performed the fluid will again accumulate and sometimes rapidly, exciting dyspnœa and causing profound general disturbance. Under such conditions, when all medicilal means have been used, there is but one indication remaining, and that is to drain the pleural cavity. There are various means of accomplishing this most desirable end. The drainage is essential, and the method to be used is determined by the extent of drainage demanded. Andrews, of Chicago, in a paper before the Illinois State Medical Society considered the various methods, and showed that there was ground for controversy, even among authorities. Tapping, incision, drainage and irrigation have advocates among some of the most eminent authorities, while others equally as eminent, believe in resection of the ribs. This last procedure is essentially German in its universality, while Americans and English use it in a small minority of cases. Resection is only indicated in the judgment of the writer, when certain peculiar conditions exist, such as purulent effusion, with danger of cicatrices in layers, preventing lung expansion.

Free drainage is certainly demanded in purulent cases, or when a sero-fibrinous exudate becomes purulent it is especially imperative that free drainage be obtained. Aspiration may be sufficient in ordinary cases, but in the cases following pneumonia empyema is apt to follow, especially during convalence, and if it does, aspiration is not sufficient to secure thorough drainage, and it is then that resection with irrigation is to be advocated. Osler says empyema rarely follows aspiration, and when empyema does result it is usually in the pleurisy following some one of the infectious fevers. There is no question as to the indication for drainage when empyema is present, and there should be but little controversy as to the method to be use in this day of aseptic surgery. F. P. N.

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For Policy's Sake.

YOU MEET him wherever you go. I mean that wise, astute physician (?) who is "in the political push" in his own community and plays for high stakes in the arena of politics. He is an anomalous article in this field, unless his motives are right, and he does right, because it is right. Politics and scientific medicine do not mix, unless the physician politician has a broad, yet comprehensive view of medico-political needs of the hour. If he is a politician for policy's sake he is digging his own grave, both as a politician and physician. If he is a politician because he knows the needs of the hour, and goes about doing it, he will live in the history of his community, and possibly that of his State. However, too many of the physician politicians are some left over two-by-fours, culled from regular practice, and are simply policy players seeking political preferment to help keep the patches off of the seat of their pants. For policy's sake they pose as the liberators of the oppressed, the friend of the down-trodden, and the foe of the heterodox advocates of party disruption. Party fealty first and party success last is the creed of the selfish-for-policy's-sake politician. This year will witness many such paretics going out of their way to be prime promoters of the political push. The loyal physician is usually an independent voter, and fears no party, but sees good in all, and wants the right thing done, no matter which party does it. Let every physician be a delegate to a convention of one member, of which he is chairman, voting delegate and powerful advocate to see the right prevail.

F. P. N.

Put the Prescription on the Bottle.

THIS was the title of a paper by Dr. B. F. Stahl, that brought out a warm discussion at the last meeting of the Philadelphia County Medical Society. The benefits claimed for this practice by Dr. Stahl were: 1. Convenience of reference right at the patient's bedside, to the drug management of the case. The feature was emphasized as being of great service to the busy practitioner, for whom no practical system of bedside records has yet been developed. 2. The extra care required of the druggist in thus copying the prescription reduced to a minimum, the likelihood of mistakes in compounding on the part of the pharmacist, or of his overlooking the ordering of what were plainly poisonous doses by the physician, as will sometimes happen. 3. By this means the giving of the prescription to the patient by the family could be made much more intelligent, if the member or members of the family having the matter in charge could have some general idea of what was being given. The author of the paper also showed his appreciation of the disadvantages of such practice, but was nevertheless convinced that these were entirely outweighed by its merits. He had been having it done for some years and was abundantly satisfied with its results. Dr. Stewart, one of the old members of the Society, stated that for years, he had had all prescriptions copied on their containers, and had more than once been

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devoutly thankful for the trouble it had averted. Professor Remington, of the Philadelphia College of Pharmacy, took an entirely negative view of the matter. Druggists were averse to so doing, unless the physician absolutely required it; first, because of the extra labor imposed, and, second, because it did away entirely with the value of any one druggist's file of original prescriptions. Moreover, it encouraged "shopping" with prescriptions, a custom that was growing rapidly enough. Lastly, it favored self-prescribing by other members of the same family and of their acquaintances when afflicted with maladies seemingly similar to that fromwhich the first patient suffered. In closing his remarks, Prof. Remington touched upon the legal aspects of the ownership of prescriptions and displayed a thorough knowledge of every phase of this medico-legal situation. His declaration that, "if a jury of 12 men anywhere in this country were called upon to decide whether the druggist who put up the prescription or the man who paid his physician for it owned the prescription, they would invariably pronounce for the patient," and his further warning that "if this question was ever forced into court to try its merits, he was sure it would go against the doctor and druggist," created quite a little stir in the society. Dr. Savary Pearce put the whole matter very clearly and succinctly when he said, that "it all resolved itself into knowing your patient. Given a highly intelligent person, such practice could only increase the *rapport* between doctor and patient. Under any other circumstances it was little short of folly to furnish to a mentally unprepared public that 'little knowedge which is so dangerous a thing.'"

What About Widal's Test?

IT HAS lately been announced that during the month of March just past there were no less than one hundred cases of typhoid fever reported in St. Louis, a number never before equaled, or even nearly approached, in the same month since the beginning of health statistics! To the casual observer this would seem a most alarming condition of affairs, but there are skeptics who have the courage to believe that it is another case of statistics misrepresenting facts. The recent opening of Chicago's drainage canal, and the agitation pro and con of its effects on St. Louis, have prepared the popular mind for a scourge of almost any description, and naturally the typhoid is attributed to that source. It is not our purpose to make light of polluted water; if our water supply is contaminated, the public should know it, and steps should be taken to immediately remedy it; fortunately we will have definite information on the subject in a very few days. But is there not a chance that we have not had so much typhoid fever after all? If it is typhoid, there are included in the list anomalous cases almost beyond belief, while the percentage of true typhoid, that is, typhoid where the clinical picture is complete, is probably no higher than is usual in this section. During the past winter we have heard of "walking typhoid," typhoid "*without fever*," of typhoid "cured in a week," etc., until we have seriously considered the necessity of revo-

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lutionizing our opinion on the dread disease, but consideration leads us to the conclusion, that the blind acceptance of Widal's reaction as proof conclusive that typhoid is present, even though the symptoms of the disease are absent, is responsible for our epidemic (?), and this leads us to repeat our inquiry of some months since, Is Widal's test a success? Our Health Department has endeavored to get at the fact of the matter, and if they have not succeeded the fault lies with the profession, for the department has never held that the presence of the reaction necessarily meant typhoid; on the contrary, they invariably request the physician to hold his diagnosis *sub judice* until the clinical picture of the disease confirms the suspicion, and they have requested reports of *lack* of confirmation as well as of confirmation. With a few exceptions the profession has failed to coöperate in the first part, and has overdone the business in the second, a fact that reflects on us and on our intelligence. The absence of negative replies spoils statistics. What about it; are we in the midst of a typhoid epidemic, or is it a scourge of ignorance and indifference? We would like to be informed.

T. A. H.

Missouri State Medical Association.

THE FORTY-THIRD ANNUAL MEETING of the Medical Association of Missouri will be held in Mexico, May 15, 16 and 17. The following papers have thus far been promised:

J. K. Bauduy, St. Louis, A Case of Secondary Carcinomatous Spondylitis; Carl Barck, St. Louis, Intra-Ocular Tumors; J. C. Crist, Lexington, Acute Inversion of the Uterus; C. R. Day, Mayview, Quackery vs. Medical Ethics; C. A. Dannaker, Kansas City, Are Obstetrical Emergencies Fully Anticipated; A. H. Ohmann-Dumesnil, St. Louis, Two Cases of Chancre of the Groin; P. S. Fulkerson, Lexington, Diphtheria; William Frick, Kansas City, Some Observations on Secondary Syphilis; Pickney French, St. Louis, Modern Pathology and Treatment of Appendicitis; R. S. Kelso, Joplin, Smallpox, Its Prevention and Treatment; O. P. Kernodle, Sedalia, Recent Improvements and Discoveries in the Science of Alimentation; H. W. Loeb, St. Louis, Limitations of the Laryngologist in the General Treatment of the Nose and Throat Diseases; F. J. Lutz, St. Louis, Report of Abdominal Surgery; John Punton, Kansas City, Hysteria and Its Protean Manifestations; E. E. Parrish, Memphis, Hystero-Epilepsy; E. L. Priest, Nevada, State Medicine; J. L. Short, Kansas City, Entropium and Its Rational Treatment; E. Van Note, Kansas City, The State's Greatest Crime; C. H. Wallace, St. Joseph, Treatment of Hernia by the Marcy-Bassini Operation.

A symposium on gall stones will be a feature of the meeting, which will include the following: Physiology of the Bile, C. Shattinger, St. Louis; Pathology of the Gall Stones, H. Summa, St. Louis; Etiology and Diagnosis, W. G. Moore, St. Louis; Medical Treatment, C. F. Wainwright, Kansas City; Surgical Treatment, A. V. L. Brokaw, St. Louis.

In addition the following have promised to contribute: W. S. Alee, Olean; L. W. Dallas, Hunnewell; J. M. Allen, Liberty; John Young

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Brown, St. Louis; J. F. Campbell, Calleo; O. B. Campbell, St. Joseph; R. M. Funkhouser, St. Louis; Hal Foster, Kansas City; C. Lester Hall, Kansas City; L. I. Jones, Linden; J. E. Jennings, St. Louis; W. F. Kuhn, Kansas City; W. P. King, Kansas City; E. W. Schauffler, Kansas City.

Arrangements have been made for an exhibit of pathologic specimens. Those who have appropriate specimens that are available are requested to notify the committee at once.

A. R. KIEFFER, M.D., Chairman,
4268 West Belle Place,
H. W. LOEB, M.D., 3558 Olive Street,
H. C. SHUTTLE, M D., West Plains,
Committee on Scientific Communications.

A Political Necessity.

IT SEEMS that the existence of christian science as a legalized practice in Illinois is a political necessity. It is one of those unfortunate situations that reminds us of the story of the deacon and the calf; the microcephalic idiot it is presumed in this instance, is the christian scientist. The deacon (the legislative committee) evidently had a hard time, and if the hole in the fence (the christian science clause) was the only feasible way of handling the calf, then the good and loyal physicians of Illinois should not worry, if a few innocent children die, or a few credulous "old fools" shuffle off or "pass over" by the aid of the open door policy. It is a political necessity. We all know that civilization in its evolution must call upon some to be martyrs; others must die that the world may move on, and if death is the only lever capable of moving legislators, it may be a plausible excuse to let the innocent children die that some good may come out of Nazareth. Christian science exists in Illinois as a political necessity, and as such it must live on. For policy's sake it must exist. It is not right, but right or wrong, it is a necessity. *Pro bono publico*

F. P. N.

The Alma Sanitarium.

ON May 1, 1900, Dr. George F. Butler, of Chicago, will assume the duties of medical superintendent of The Alma Sanitarium, made vacant by the resignation of Dr. Elmore S. Pettyjohn. Dr. Butler needs no introduction to the profession, as he has won his spurs in the field of practical medicine by his ability as a practitioner, author, teacher and editor. He is a worthy successor to our esteemed friend, Dr. Pettyjohn, and we bespeak a hearty welcome to his new position by the friends and patrons of the Alma Sanitarium, which has become one of the strongest institutions in America.

Dr. Pettyjohn retires to go abroad for a year or more for special study and recreation. We wish him a successful and safe journey, and hope that the fortunes and inspirations of travel and study may be most bountifully strewn along his path.

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The Reviewer's Table.

Books, Reprints, and Instruments for this department, should be sent to the Editors, St. Louis

IF RIGHTLY used quiz-compends are a great help to the student, but if, as is too often the case, they are studied to the exclusion of the large works, they develop a superficial method of thought which should be discouraged. This small manual is intended as a substitute for the various compends, dealing with the subject in an intelligible manner; giving fuller and more accurate information than can be obtained from them. The histology and pathology, as well as the physiology of the various organs, are considered to some extent.

LEA'S SERIES OF POCKET TEXT-BOOKS. Edited by BERN B. GALLAUDET, M. D. PHYSIOLOGY. A Manual for Students and Practitioners. By HOWARD D. COLLINS M.D., and WM. H. ROCKWELL, Jr. M. D. of College of Physicians and Surgeons, (Columbia University), New York. Illustrated with One Hundred and Fifty-three Engravings. LEA BROTHERS & CO., Publishers, Philadelphia and New York. $1.50.

THE exhaustion of the very first edition of this standard work shows how well it has met the needs of students and practitioners, and its eminent author has fully utilized the opportunity thus offered by subjecting his book to a most thorough and searching revision. Many chapters have been entirely rewritten, new ones have been added, and every page has been revised in order to present the most recent achievements in the entire field of surgery. Everywhere will be found the closest attention to modern pathology and asepsis. In short, the volume will be found a clear, concise, comprehensive and practical presentation of the most modern surgery, thus fully justifying its title. The rich series of illustrations has been revised with equal care, and the student or practitioner will not find a more satisfactory or valuable single volume work on this subject.

THE PRINCIPLES AND PRACTICE OF MODERN SURGERY. For the use of Students and Practitioners of Medicine and Surgery. By JOHN B. ROBERTS, M. D., Professor of Anatomy and Surgery in the Philadelphia Polyclinic; Mutter Lecturer on Surgical Pathology of the College of Physicians of Philadelphia. New (2d) and revised edition. In one very handsome octavo volume of 838 pages, with 474 engravings and 8 plates in colors and monochrome. Cloth, $4.25, net; leather, $5.25, net.

THIS is a new and revised edition of a medical dictionary which has maintained its popularity for half a century. Unlike most other books on medicine a dictionary derives a distinct and obvious advantage from long establishment. It possesses the older words which merit observation, and in the course of the various revisions the newer additions down to the latest date come before the reviser's eye, and the obsolete terms are dropped; hence a volume such as the present offers a vocabulary selected in a manner giving a view of medical terminology at once homogeneous and in proper perspective.

HOBLYN'S DICTIONARY. A Dictionary of the Terms Used in Medicine and the Collateral Sciences. By RICHARD D. HOBLYN, M. A., Oxon. New (13th) Edition. Revised by JOHN A. P. PRICE, B.A., M.D., Oxon. In one 12mo. volume of 845 pages. Cloth, $3.00 net. Philadelphia and New York: LEA BROTHERS & CO.

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PHILADELPHIA LETTER.

[SPECIAL CORRESPONDENCE.]

GROWTH OF PHILADELPHIA'S MEDICAL COLLEGES.

Since the Civil War no medical institution of learning has undergone a more remarkable expansion than the University of Pennsylvania. At that time a strictly local institution, it has attracted to itself this year 2673 students, 986 of whom belong to the college course proper, 172 to the post-graduate school, 313 to the law school, 682 to the medical school, the remaining few being scattered among the other departments. Besides the college proper, the law school and medical school, there are now departments of dentistry, veterinary medicine, archeology and paleontology. Pharmacy is woven intimately into the regular medical course, as it should be. It has just been announced, that hereafter bacteriology is to be reckoned as a major branch, in the sophomore examinations. This is a step in the right direction, for with all the problems in public hygiene and sanitation that are now arising and promise to multiply manifold, there will be urgent need for much expert work in this line.

Jefferson College is now comfortably housed in its new building, and shows an activity that promises much for the future. The work having in view renovation and extension of the adjoining hospital building will now be pushed. It would be hard to estimate the present-day value of this tremendous property situated as it is in the heart of Philadelphia's business center.

The Medico-Chirurgical College, too, has caught the spirit of expansion, and each year reaches out in some new direction. It has now a department of pharmacy, and one of dentistry, to which, it is said, a department of veterinary medicine will ultimately be added.

MEDICAL INSPECTION OF PUBLIC SCHOOLS.

The recently established inspection of public schools by a staff of 300 physicians is already bearing fruit. Two weeks ago two cases of diphtheria were discovered, and prompt measures were taken to prevent an epidemic. Last week, through the vigilance of one of the inspectors, a supernumerary kindergarten in West Philadelphia was closed and fumigated thoroughly, because of the discovery of diphtheria in a middle-aged woman living in the third floor of the building, which was being temporarily rented as kindergarten quarters. As the teachers become better acquainted with the early outward commoner signs of the exanthemata, it is probable that even more far-reaching results will be obtained. Through the work of this staff and its representative committee before the Public Education Commission, the Board of Education have been induced to adopt a resolution directing that all possible sunlight be admitted to the school-room; that children be forbidden to spit on the floors; that they be compelled to go into the yard during recess; that coat and cloak-rooms be disinfected; that ordinary slates be abolished; and that children with dirty faces and hands be sent home to their parents for a bath.

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The discouraging feature in connection with this public school inspection is the way medical men have fairly tumbled over each other and over themselves to secure appointments as inspectors. If they were paid positions, the fierceness of the struggle would be more nearly understandable. But they are not. Politics and all other conceivable levers were used to pry out an appointment. Is it not enough that our brethren fling themselves fanatically under the Juggernaut of Hospitalism? Must they now seek other means of pauperizing the community? It seems right to ask whither this mania of senseless giving away of valuable professional time will next lead us?

MALT CREAM.—Malt foods enjoy great popularity, and deservedly so; the healthy competition between manufacturers has brought the principal brands to a high and uniform grade of excellence, which seems very near perfection. Dr. Allen's malt cream, which is one of the newer preparations, is prepared to take rank among the very best of its kind. It is destined to meet the approval of all classes of invalids. It is a partially predigested food, containing all the butter-fat of fresh cream combined with the nutritive elements of barley malt. It is put up in granulated and tablet form.

THE MISSOURI STATE MEDICAL SOCIETY.— The annual meeting of our State society will be held on the 15th, 16th and 17th of next month, May, at Mexico. Preparations for this meeting indicate that it will be one of more than usual interest and importance. The profession and citizens of Mexico plan that the entertainment shall be all that their hospitable reputation could indicate. Mexico is very conveniently situated, and readily accessible from all parts of the State, the town is 110 miles west of St. Louis, and 160 miles east of Kansas City on the Wabash Railroad, while the C. & A. passes through from north to south connecting with other east and west lines. The delegation from St. Louis will naturally go by the Wabash, and every consideration for their pleasure and convenience is assured. Reduced rates will be made on the certificate plan, as usual.

THE meeting of the Tri-State Medical Society held in this city, April 3d and 4th, was characterized by a lack of interest on the part of the local profession, which must have surprised the visiting physicians, but which seems perfectly natural to those who are acquainted with conditions here. The program included many strong features, the papers and clinics of the guests of the association being especially worthy of mention. Dr. Baldy, of Philadelphia, and Dr. Cordier, of Kansas City, contributed largely to the scientific success of the meeting. The unavoidable absence of Drs. Murphy and Robinson, of Chicago, caused much regret. The following officers were elected for the ensuing year: President, Dr. Henry Hatch, of Quincy, Ill.; first Vice-President, H. Landis Getz, Marshalltown, Ia.; second Vice-President, A. S. Van Horn, Jerseyville, Ill.; Treasurer, re-elected, D. S. Fairchild, Clinton, Ia.; Secretary, W. B. La Force, Ottumwa, Ia. The society will meet in Keokuk next year.

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Original Department.

PAPERS for the Original department should be in hand one month in advance, and contributed to THE MEDICAL FORTNIGHTLY exclusively. A liberal number of extra copies will be furnished authors, and reprints may be obtained at reasonable rates, if request accompanies the manuscript. Engravings from photographs furnished free.

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A Short Clinic on External Urethrotomy.

BY REGINALD HARRISON, F. R. C. S.,

LONDON,

Surgeon to St. Peter's Hospital.

THE examination of a patient who was operated upon for stricture by external urethrotomy over a year ago, gives me an opportunity of referring to some points connected with this operation to which I attach importance. The case may be taken as a typical one of its kind, of the details of the operation employed, and of the results to be aimed at.

This patient is a man, aged 47, who has suffered from stricture of the deep urethra for several years. He has been treated by various methods of dilatation, but with no permanent benefit, and attacks of retention, hemorrhage and cystitis have been frequent complications. At the end of 1898 I took him into the hospital and performed an external urethrotomy in the following manner: As the stricture would only receive a filiform guide an internal urethrotomy was first performed with Maisonneuve's instrument. Then a full-sized grooved staff was passed into the bladder to complete a perineal section. Exploration with the finger from the perineal wound enabled me to detect some stricture fibres which had escaped the internal urethrotomy, and these were divided with a probe-pointed bistoury. Then I could pass my finger readily into the bladder and forwards along the urethra towards the external meatus, thus showing that the constriction had been completely removed. A full-sized gum elastic bladder drainage tube was passed into the bladder and secured. For the latter, a flexible rubber one was substituted on the fifth day, and after sixteen days drain-

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age and irrigation, so as to keep the divided stricture thoroughly cleansed, the wound was allowed to close, and the patient left the hospital after a three weeks' stay. During the after-treatment the distal portion of the urethra was washed out and kept clean by syringing from the external meatus, and so out by the wound.

He was instructed to use a full-sized bougie, and to report himself from time to time, but as he remained well he did neither. Fancying, however, after a recent attack of influenza that there was something wrong with his urine he came to see me. There was nothing amiss with the latter beyond an excess of urates, and I was able to pass a series of bougies from No. 10 (English) to No. 15 (French 26) easily and without pain.

I usually select Maisonneuve's instrument in these cases for the preliminary internal urethrotomy, as it will enter any stricture however narrow without any previous dilatation, by means of its filiform guide. Some prefer a urethrotome, which divides the stricture from behind forwards, but I do not think this makes the least matter so long as the end of the instrument is within the bladder.

The kind of drainage tube referred to is made in different lengths and sizes to fit the wound and deep urethra and bladder with as much accuracy as a tracheotomy tube fits a windpipe. From the day it is inserted it commences to mould the repairing urethra to the dimensions required. It is readily used, or temporarily removed for the purpose of irrigation and cleanliness, and when any slight risk of bleeding or oozing is over, which might require side-packing its place is taken by a soft rubber tube with depressed openings of similar dimensions. Thus cicatrization proceeds up to the time of its final removal.

I first had these tubes made for me in the days when lateral and median lithotomy were common operations. On several occasions when there was oozing or free bleeding which could not be stopped, I inserted one of the largest of these tubes, about the dimensions of an average thumb, and closed in the incision around it firmly with sutures. This invariably arrested the bleeding, whilst the flow of urine remained uninterrupted, and the patient was readily kept quite dry. This is the most effectual and convenient way of arresting bleeding in this class of operations.

I might have added further illustrations in correspondence with the case I have related, where patients have been under observation for long periods, but after what I have already written elsewhere* this is hardly necessary.

External urethrotomy seems specially applicable to the following class of cases:

(1) To resilient and rapidly contractile strictures in the deep urethra which, like burn-scars, are unamenable to stretching or dilatation, and where a splice or an interval of new tissue is required within the circumference of the contraction. It was in this class of cases where dilatation had failed, or recurrence had occurred that Syme first demonstrated the permanent advantages of this operation.

*Surgical Disorders of the Urinary Organs. 4th ed. 1893.

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(2) In cases where the wound made by an internal urethrotome is out of proportion to the natural drainage possibilities of the urethra. A wound may be so constructed within this canal as to never drain completely either in regard to urine or its own discharges. The result is much the same in these circumstances as what follows accidental lacerations of the urethra. Some years ago I demonstrated in a considerable number of cases that partial ruptures of the urethra from violence, when treated promptly by perineal section and drainage, were no more liable to be followed by traumatic strictures than either a median or lateral cystotomy for stone.

I was led to draw this conclusion, and to apply it in practice, by noticing that it was the slighter cases of ruptured urethra either not treated at all, or by the retention of a catheter, which were followed by the most dense and contractile forms of traumatic stricture. Whereas, the severer cases where the rupture was so extensive or so complete as to render the introduction of the latter instrument impossible and to necessitate a perineal section with bladder drainage, did the best, and were much less liable to the subsequent formation of a stricture at the site of the wound. Surgical cleanliness and drainage were evidently important items in the prevention of the latter.

In dealing with any lesion of the urethra, made either accidentally or surgically, we must feel fairly sure that the unaided efforts of the wounded canal are sufficient to furnish adequaite drainage, otherwise this should be artificially supplied. It is reasonable to infer, from these observations, that in the larger proportion of cases where internal urethrotomy gives excellent results, that, the operation precisely fulfils the required conditions, namely, the complete division of the stricture by a wound which the urethra itself is capable of drainage.

It is no doubt possible in some instance where considerable wounds are made within the urethra, to supply the necessary drainage by the retention of a catheter for some days after the operation. This expedient, however, often breaks down, as in the case of accidental injuries, and is not so reliable or cleanly as the external incision and drain tube. These provide alike for the urine as well as for the discharges of a wound, which can only be imperfectly placed under antiseptice influences.

(3) In cases of stricture complicated with urinary fistula and sinuses. The division of the stricture from without and the formation of a single opening for urine drainage communicating with the bladder, often leads to a speedy recovery in these instances.

(4) In cases of stricture with extravasation of urine. The division of the former with direct drainage of the urine from the bladder as well as from surrounding tissues, is a matter for separate consideration.

(5) In some rare cases of wounds connected with the treatment of stricture which are rapidly followed by acute symptoms of impending death. I had occasion to perform Holt's operation for a man with chronic stricture. The operation was apparently safely accomplished. Some six ounces of urine were voluntarily passed twelve hours afterwards when the patient had a severe rigor and was much collapsed. With the exception of a few more drachms, no more urine was passed, and twenty-four hours

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after the operation a second rigor occurred with a temperature of 105°. Acting upon the opinion I formed, that this patient was poisoned by something that was being absorbed through the urethral wound, and that another dose would probably kill him outright, I performed an external urethrotomy, and put a large drainage tube into the bladder. The patient had no further rigor, free excretion of urine followed, and he made a good recovery. I am sure the latter was entirely due to the course that was adopted.

Another instance of acute suppression of urine which I saw in consultation under similar circumstances was dealt with in the same way equally satisfactorily. Had death occurred in either of these cases, as seemed probable, there was no reason to believe that renal disease would have been discovered other than the congestion, which is invariably found in instances of this kind, and which is probably directly due to the poison that is absorbed.

The points to which I attach importance in the operation of external urethrotomy are these: (1) The use of a guide. (2) The utility of internal urethrotomy as an immediate preliminary to the external operation. (3) The more efficient provision for urine and wound drainage.

(1) External urethrotomy when performed without a guide, as far as the stricture is concerned, is seldom anything else but a difficult, a dangerous, and an incomplete operation. Fortunately, now it may be said that there is little or no necessity for making an attempt under such adverse circumstances. So long as the canal is capable of transmitting urine even in minute quantities, there is evidence as to its permeability; or, as Syme puts it, "If the urine is permitted to pass, no matter in how small a stream, there must be room for the introduction of an instrument, provided it is sufficiently small and properly guided." An impervious stricture necessarily means the presence of an urinary fistula behind the point of obstruction. If such conclusions could have been formulated in Syme's time, how much more are they applicable now, when we consider the great improvements that have taken place in all kinds of instruments used for this purpose.

But cases do occur though much more rarely than formerly, where it is found impossible, by reason of the character of the stricture, to enter the bladder with a urethrotomy guide or ordinary staff. Wheelhouse's method of dealing with an impassable stricture, though affording conclusive evidence of the permeability of all strictures not complicated with an ordinary fistula, will be found to furnish a solution to the difficulty. Thus an external urethrotomy may be completed as perfectly as if an ordinary grooved staff were used.

Hence it may be concluded, that no case of external urethrotomy for stricture should now be undertaken without the assistance of a guide, otherwise the chance of success is extremely remote. The restoration of a structurally occluded urethra, where the whole of the urine escapes through a fistula is another matter, and will require separate consideration.

2. The utility of an internal urethrotomy an immediate preliminary to the external operation is shown by the ease and completeness with

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which the latter can be carried out on a larger staff than could otherwise be used.

(3) The necessity for providing the most efficient and cleanly kind of urine and wound drainage in connection with external urethrotomy for stricture, is apparent from what has been advanced. The entire character of the tissue by which the stricture is repaired after it has been divided either in external or internal urethrotomy may be importantly determined by the nature and duration of the drainage and irrigation that is employed.

I am not aware that the influence of the latter on scar tissue which forms after lesions of the urine passages, has ever been adequately considered from this standpoint. I am glad to find that "the remote effects of surgical lesions of the urethra (interventions sanglantes) have been selected for discussion at the Paris International Congress this year, in the Surgical section presided over by Professor Guyon, reports on this subject, having been officially invited by Professor Albarran (Paris), Professor Mariachess (Odessa) and myself.

In presenting these observations my objects are (1) to simplify and to render more effectual the operations of urethrotomy, and (2) to substitute the least contractile and most pliable form of cicatrix, or cicatricial interval, for the original stricture.

THE commencement exercises of the St. Louis College of Physicians and Surgeons will be held at Memorial Hall on the evening of April 11th. The school closes a prosperous year, graduating a large class.

THE LOUISIANA STATE MEDICAL SOCIETY will meet in New Orleans, April 19, 20 and 21. With a view to making the program more interesting the chairmen of the several sections have arranged for each a subject for general discussion. Any paper on any point of medical or surgical interest will be listed on the program among the papers in the Miscellaneous Section.

BEAUMONT-HOSPITAL MEDICAL COLLEGE COMMENCEMENT.— The local commencement season was opened on the evening of March 30th by the Beaumont-Hospital College. In several ways the year just ended has been one of the most prosperous in the history of "Beaumont," the graduating class was larger than any before in several years, and this, in spite of greater requirements and more rigid inspection of candidates. The class of 1900 promises to be an honor not alone to its Alma Mater, but to St. Louis as an educational center as well.

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Etiology of Beriberi.

BY ALBERT S. ASHMEAD, M. D.,
NEW YORK.

LET me say for the instruction of some critical European doctors from Dutch-land, resident in America, and by courtesy (without reciprocity), of our United States laws, allowed to make their living here, that Dr. Dieren* by no means represents Dutch East Indian medical opinion on the subject of berberi. He is *alone* in his belief that the disease is due to an *intoxication* from rice. All of his own countrymen oppose him.

Pifnappel and Van der Burg *protest against his entering the discussion at all.* Eijkman says that Van Dieren cites only phrases of different authors who can give weight to his *peculiar* theory, and that he does not even cite these *accurately*. And he says that it is time that physicians *who have never seen a berberi country cease to give their opinions, and leave the real examiners tranquilly to their work.* I agree with Dr. Eijkman.

Fokker says that Van Dieren has given *only an opinion*, and that he has backed it up by no researches.

Eijkman believe the disease "to be *infectious*, and because of this belief he examined the blood of beriberi, and found plasmodium, which has some resemblance to the plasmodium of malaria." "It is very difficult," he says, "to see plasmodium of malaria, when the attacks of fever have ceased." On the contrary, he found *always* and regularly the plasmodium in patients of beriberi, who had never had malaria, but without doubt beriberi. He found, he says, plasmodium in the red corpuscles, only rarely. In the living blood he never saw it but only in the dry preparation, colored after the method of Plehn, or with hematoxylin, or eosine. They can form spores. These spores he had observed in the red corpuscles of the blood, and they had forms very polymorphous."

Mr. Vorderman, who was sent by the Netherlands government to Java and to Madoura, to examine into the state of salubrity of the *ninety-five prisons* there, found that the geographical positions of those prisons which were afflicted with beriberi, showed that the diet of rice decorticated or not, red or white, proved that rice was not the real cause of beriberi. Although he thought that alimentation had something to do with the outbreak. The real cause he believed to be "the influence of a micro-organism." In 37 prisons, where they had given *red* rice (with the pericarp), beriberi was observed in a single prison, that is 2.7 per cent in 13 prisons, with mixed alimentation, red and white rice, he observed beriberi in 6 prisons, or 46.15 per cent; and in the 51 prisons, where they gave *white* rice (without pericarp), beriberi existed in 36, or 70.98 per cent. The geographical position of these prisons was as follows: In the eastern part of the island of Java, and on the island of Madoura, beriberi was found in *nearly all* the prisons, that is, generally; this is only the case since the last twelve years.

* See N. Y. Med. Jour., Oct. 28 (correspondence).

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It was observed, he says, that there had occurred cases of beriberi after some other patients *had been transported to these prisons.* Of 88,028 prisoners who ate rice without pericarp, there had been 2.68 per cent sick with beriberi, and among 62,238 prisoners fed with decorticated rice, the percentage was 2.95 per cent. Mr. Vorderman, in acknowledging *the great influence of alimentation with decorticated rice* (*white rice*), is, he says, aware that this is not the only cause, because one finds beriberi in 71 per cent of some prisons where this rice is the principal nourishment, but "that there is a prison in Bangkallon where notwithstanding this nourishment *there is no beriberi,*" and this is what makes him believe there is an influence of *micro-organisms. He is a strong partisan, too, for disinfection.* In speaking of Van Dieren's book, "*Beriberi une intoxication avec du riz,*" he arrives at the conclusion, that it is to him impossible to partake of this opinion, but that he is more convinced than ever, that *beriberi is an infectious disease,* in which the alimentation plays an important role.

In *De Indische Gids,* 1897, there is an article by Dr. Van Gorcom, entitled "*La question du beriberi, intoxication ou infection,*" in which the author discusses Van Dieren's theory. Mr. Van Gorcom says that *the conclusions of Van Dieren, that beriberi is caused by rice,*" has the defect not to be the necessary consequence of the facts mentioned in his book. But mostly *a resume of his own contemplations, which are stuffed with too many reasons, analogies, imputations, phantasies and some arguments very ill chosen.*" Mr. Van Gorcom thinks that Mr. Van Dieren has given too many captious reasons in the showing of his theory, and *that all lack reality.*

Mr. Van Gorcom also says, that as to the Netherland's marine, the published figures by Dr. Van Leent and by Dr. Van der Elst, show important amelioration, *but that they do not prove anything,* because the cases of beriberi *diminished not only among the natives,* who got 1000 grammes of rice a day, *but also among Europeans who did not take any rice,* but had their ordinary nourishment. As to the Japanese marine, he says that the diminution of cases of beriberi *had already commenced,* before the alimentation had been ameliorated. Mr. Van Gorcom "has the conviction that beriberi *is an infectious disease,* and that alimentation *plays certainly* a role in its causation, as is the case with all *the infections,*" but it cannot be considered as the essential cause. It is impossible, he says, to declare rice the real cause of beriberi, as one observes cases of this disease among persons who do not eat it. Since toxic matter, therefore, has not entered into the body, *one cannot speak of intoxication.*

"Drs. Eijkman and Vorderman in the Netherlands East Indian researches," says Von der Burg, "have made *undeniable* the possibility that rice *may have some influence* on the origin of beriberi, but *but that it is very uncertain that rice has a toxic principle.*" Vorderman says that rice which has been preserved too wet, becomes yellowish, perhaps by *some micro-organisms.* But that this rice does not seem to have an influence, because it is never given for a long time, and that there are some prisons *where one does not find beriberi,* and where the prisoners eat this rice.

Dr. Von der Burg reviewing Van Dieren's work on beriberi (Eene rijst-vergrfliging Kritisch, historisch Vijdraze tot de kennis der Meel. Ver-

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giften door E. Van Dieren, Amsterdam, 1897) says that Dr. Van Dieren is taking much pains in the last ten years to show that beriberi is developed by *an intoxication caused by rice*, but that the poison is not yet known to him. "In this book," Von der Burg adds, "Van Dieren resumes his anterior publications, and adds many new arguments. However reasonable these are, it must not be forgotten that he compiles only facts *which are convenient to his theory, and leaves out all that oppose it.*"

Referring to the oft-quoted improvement in the Japanese navy "since rice was eliminated" from the ration, let me here, Mr. Editor, quote a letter which I wrote to Dr. S. Suzuki, fleet surgeon of the Japanese Imperial Navy, and Naval Delegate of Japan to the Twelfth International Medical Congress, at Moscow, 1897:

SIR:—In the *Sei I. Kwai Medical Journal*, October 20, 1897, page 359, under the title, "The Sanitary Condition during the War," you say, "Since 1882, a committee for preventive measures against kakke, was appointed, and after thorough investigation *it was decided*† that the kakke originates from improper administration of food, that is, too large a quantity of carbohydrates, as rice, and too little of albuminoids, as meat, so since 1884, by diminishing the quantity of rice, and increasing that of meat for the seamen's rations, an improvement in the scale of diet was put into practice. Since then, as we anticipated the cases of the kakke suddenly decreased, and the *health of the seamen, in general, being promoted*, not only kakke, but all other diseases of seamen were diminished. Thus kakke was extirpated in 1886." (All italics mine.—A.)

Does it not strike you that if the change of diet in the Japanese navy since 1886, has been productive in a diminution of all kinds of disease, "the change of diet" does not look as if it was a specific against kakke?

You say further: "Kakke was extirpated in 1886." Will you kindly give me the kakke statistics since 1886, so that we may compare them with the anterior statistics? Will you also obtain for me the statistics of kakke in the Japanese army (especially of the Tokio barrack‡) for the same period (1878 to 1894), as is given in Dr. Saneyoshi's Annual Report of the Health of the Imperial Navy, 1894), so that we may compare them too. Also, give me, please, the kakke statistics of the navy since 1894, so that we may know whether the late recrudescence* of this disease has kept up. Certainly the same improvement of diet was put in force in your army as in your navy, yet kakke was not eradicated there. Why?

With much respect, Yours truly,

ALBERT S. ASHMEAD, M. D.,

Late Foreign Medical Director Tokio Hospital, and Medical Counselor to the Governor.

In 1889 kakke began to reappear in the Japanese navy, and continued, according to the last statistics, down to 1894, when there were 29 cases. Of twelve of these patients, on one man-of-war, ten were stokers, men

† Although this Japanese Committee has *decided* this question, the discussion still goes on all over the world!—A.

‡ Charcoal "hibatchis" or stoves are still used there.

* 1889.....3 cases 1891.....1 case 1893..... 1 case
1890.....4 " 1892.....3 " 1894..... 29 "
Japanese Navy Report.

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working over the furnaces. The Japanese theory of this outbreak of beriberi is that these men began to eat rice again (as if a Japanese ever stopped it!), and that those who worked in the boiler-rooms at a high temperature in a hot climate (Honolulu is where it occurred), "were caused to drink water to excess, in consequence of which they injured their digestive organs." Under such circumstances, the report says it was, that so many cases of the disease occurred on the ship! Which highly scientific and peculiarly Japanese flavored explanation is one which explains really nothing.

In my opinion, the pathology of beriberi is summed up as peripheral neuritis and myelitis of extremities and of the heart, dropsy following by osmosis through the paralyzed coats of vessels. Dangerous symptoms are respiratory and heart complications, gasping for breath, cyanosis, vomiting, etc. Evidently the pneumogastric nerve is implicated. The best treatment is transplantation to an altitude, fresh air, oxygen by tank, and diaphoretics and diuretics. Hemoglobin being deficient in every case of beriberi, and the red corpuscles being always normal, prove that the disease is not caused by insufficient alimentation.

From the facts of the beneficial effect of altitudinal treatment, and the fact that in cities of Japan, where the disease is rampant, it is the lowest wards which have the largest percentage of cases, I infer that the disease is due to some poison heavier than air. As oxycarbonation of human blood does not diminish red corpuscles, and does diminish the hemoglobin, and in the same proportion as presented in beriberi, I conclude that carbon is the poison. Every ship that has come into port here, with beriberi on board, showed a source of carbonic oxides. Cargoes of sugar, of fermented sugar, coffee that had fermented, or sweated on the voyage from Java, hemp that had sweated from Manila, graphite (pure carbon) from Ceylon, 75 negroes cooped up in a small cabin for thirteen days and nights from Navassa, West Indies, etc. In Japan the sources of carbonic gases is the national charcoal stoves. In Brazil, the workers in sugar packing, are affected.

I have, I believe, shown in a great number of articles which may be obtained by library references in America, that carbon lies always at the bottom of the disease; paralyzing the nerves of the capillaries, allowing the water to exude. In Japan up to the very time of the improvement of the navy-diet the sailors who sat around all the day, as is the national custom, their Japanese "stoves" smoking, and drinking their everlasting charcoal-heated tea, in a damp atmosphere (June, July and August, the rainy season, are the beriberi months) were, in my opinion, undoubtedly poisoned by the fumes of charcoal. Men do this, more than women and children, and therefor these latter, have an immunity. In Tokio, it is as I have said, the lowest-lying wards, which have the most cases of beriberi.

In ships coming to New York loaded with thousands of tons of raw sugar, with rotten hemp, with broken and wet barrels of graphite (pure carbon) beriberi broke out. "Burnt" sugar cargoes, that is, coffee shipped too green, and that has fermented and charred on the long voyage of the Dutch East Indies, caused beriberi. If I could enumerate the outbreaks

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which I have investigated, you would see that in every instance there was an elimination of carbonic gases.

That a germ is not the cause of beriberi is clearly proved by a case occurring on the top of Fuji-yama mountains, in Japan, 12,000 feet above sea-level, in the cold and dry month of December, when there is no beriberi in Japan. If the germ existed and developed on top of Fuji in such intensely cold and dry climate, and in a north-wind blowing month, why does it not develop at sea-level in that same month? It never does.

Beriberi was caused in this case, too, by carbon, the patient was shut up tightly in his little cabin, with his poisonous charcoal stove§ to keep himself from freezing to death. As it was, his fingers and toes were badly frozen.

Beriberi ceases spontaneously in Japan, as soon as the cool north winds begin to blow. It exists there only in the hot, rainy season, when the atmosphere holds down the charcoal gases from the thousands of stoves in crowded communities.

Rice decorticated (white), or with the pericarp (red), call it Japanese, Chinese, Rangoon, Sumatra or Carolina (God bless it!) has nothing to do with beriberi. That ancient Asiatic theory is as hoary as the Chinese hills. It is the fumes of the fuel of the Japanese stove that causes beriberi.

The Treatment of Venereal Lesions.

BY MAYER SHOYER, M. D.,

LEAVENWORTH, KAS.

SEVERAL years ago the treatment of lesions of venereal origin was confined almost to the use of iodoform. In fact iodoform became so closely identified with the treatment of this class of cases that it was possible to diagnose a case under treatment by the odor that emanated from it. But this was not the least objection to the drug, for as experience with it accumulated it was found in many instances not only to produce severe local irritation, but even toxic effects from its absorption into the system. Numerous cases of iodoform poisoning have been recorded in the literature; and it is probable that many cases of fever, delirium, and renal disorders, attributable to septic infection, have really been instances of iodoform toxemia. It is owing to these objectionable features of iodoform that we possess the large number of substitutes, which have been placed at our disposal through the efforts of the pharmaceutical chemist. It is my intention here to discuss only one of these, europhen, with which I have had extensive experience, especially in the treatment of venereal troubles, and,

§A Japanese house has no chimney. In dry, cold weather, that is, non-beriberi months, the outside wooden storm walls are down, but in the wet, hot months, the beriberi season, these air-proof walls are always up to protect the inside paper walls from moisture and ruin. Therefore better ventilation exists in winter.

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which, in my opinion, deserves the title of being the most perfect iodoform substitute yet introduced to the profession.

Europhen, di-iso-butyl-cresol-iodide, is a fine amorphous powder, light yellow in color, made by the action of iodin upon isobutylcresol in a potassium iodide solution, its odor is aromatic, and resembles that of saffron. It is soluble in ether, chloroform, alcohol and in oils, but insoluble in water and in glycerin. It is incompatible with starch, metallic oxides, and the salts of mercury. Its specific gravity is one-fifth of that of iodoform, and it is much less likely to cake. Europhen is permanent in the dry state, but on prolonged contact with moisture it is decomposed with the evolution of free iodin. The amount of iodin which europhen contains is said to be 27.6 per cent, and it is to the fact that it yields this iodin on exposure to moisture that it owes its therapeutic value. Europhen is similar in action to iodoform, but has the great advantage of having a less disagreeable odor, and of being devoid of poisonous effects. Europhen adheres firmly to the skin, mucous membranes and open surfaces; when taken into the system it undergoes but little change, and a very small proportion of the iodin is found in the urine, the greater part passing through the intestinal canal unchanged. Europhen is non-toxic; but by its chemical action prevents the development of pathogenic micro-organisms in culture media.

Perhaps there is no venereal trouble more common than chancroids, and the treatment advised by various authors is anything but satisfactory. Some authorities advocate cauterizing the lesions, but any method which will shorten the duration of treatment, lessen the pain, and which requires the less attention, is certainly preferable. The method which I will describe in brief is superior to any advocated by the various clinicians, and productive of far quicker results. The chancroid is washed with warm water and soap, then with bichloride 1-1000, and dried. Europhen is then applied twice a day to the lesion, and in a few days the ulcer is dry and the patient cured. In suppurating chancroidal lymphadenitis, after the evacuation of the pus and the thorough cleansing out of the abscess cavity, apply europhen, and excellent results will be obtained. It is remarkable how quickly relief will be obtained from the use of europhen in venereal work. The average duration of chancroids is five days. The absence of odor makes europhen agreeable to the patient, as he will not attract attention nor be asked embarrassing questions.

In tertiary syphilitic lesions europhen does good; and in burns it is an excellent application. It may be used dry or in combination with olive oil, three parts of the former to seven of the latter. Only slight success has been obtained so far from the hypodermic injections of an oily solution of europhen in the treatment of syphilis.

Varicose ulcers treated with europhen heal rapidly, and in minor surgery it is an ideal dusting powder. A good way to apply europhen to contused, lacerated or incised wounds is to dust it lightly over the surface and allow the fumes of ether to come in contact with the powder, which melts, forming a sticky substance which soon hardens and seals upon the wound. This is not easily washed off, and is therefore an excellent way to treat wounds about the face, or where a large bandage would be undesirable or not easily kept in place.

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The drug was of value in cases of acute vesicular eczema, while the ointment rendered good service in cases of chronic eczema. Benefit has been derived from the use of tampons impregnated with europhen in gonorrhea of females, and good results have also been obtained with it in perforating ulcer of the nasal septum, and in epistaxis dependent upon erosions of the septum. Europhen has also been successfuly employed in suppurating inflammation of the middle ear.

CASE 1.—J. R. Suppurating chancroidal lymphadenitis on both sides. The buboes were incised and swapped out with bichloride, and the cavities filled with europhen every day. Steady improvement followed, but the case was lost track of, the final results being unknown.

CASE 2.—Joe B. Chancroid. Nitrate of silver was used at first, but without success. Europhen was then given a trial, and effected a cure in six days.

As I believe iodin will be the drug used to cure gonorrhea in the near future, I decided to try europhen in the following case.

CASE 3.—Miss G. H. contracted gonorrhea, and being a girl of fifteen or sixteen years of age, went decidedly hard with her. The vagina was irrigated with bichloride 1-10,000, and painted with argenti nitras 10 per cent, and a glycerin tampon was repeated for three days. Europhen was then applied to the entire surface of the vagina, including the urethra, and a europhen tampon placed in the vagina, which was changed every twelve hours. There was steady improvement with a final arrest of the discharge.

CASE 4.—Miss F. B. when seen by myself was suffering from chancre and gonorrhea, and the vagina was covered with numerous small suppurating foci of gonorrheal origin. The chancre was treated by irrigating the vagina with permanganate 1-2,000. Cotton impregnated with europhen was then inserted; this was changed every 12 hours. The chancre disappeared in eight days, and the abscesses in three. The gonorrhea in this case was not treated with europhen.

CASE 5.—T. M. Tertiary lesion on the neck. This was treated by the use of hydrogen peroxide and europhen, with potassium iodide internally. The lesion was dried up in two weeks.

CASE—6. Mr. M. Tertiary lesion on the side of the nose which had eaten its way into the nasal cavity. The lesion was thoroughly cleansed and europhen packed into the cavity; potassium iodide and corrosive sublimate being given internally. Noticeable improvement in ten days.

CASE 7.—H. H. Chancroids (three), which were very painful. He would not allow me to cauterize them, or use anything that would cause pain. As he was going before the army board for physical examination in two weeks it was essential that he should be relieved of his present condition. Europhen was dusted on twice a day for two days, when he was taken with an attack of malaria, which confined him to his bed for three days. The chancroids were treated along with the malaria; the fourth day he walked into the office looking happy; chancroids healed.

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Reports on Progress.

COMPRISING THE REGULAR CONTRIBUTORS OF THE FORTNIGHTLY DEPARTMENT STAFF

GENERAL SURGERY.—C. E. Black, M. D., Jacksonville, Ill.

DISEASES OF THE CHEST—W. W. Bulette, M. D., Pueblo, Colo.

INTESTINAL AND RECTAL SURGERY—S. G. Gant, M. D., New York City.

DISEASES OF THE MIND—Frank C. Hoyt, M. D.

RHINOLOGY AND LARYNGOLOGY—John A. James James, M. D.

GENITO-URINARY SURGERY AND SYPHILOLOGY — Bransford Lewis, M. D.

OPHTHALMOLOGY—J. Ellis Jennings, M. D.

ORTHOPEDIC SURGERY — Phil. Hoffman, M. D.

GYNECOLOGY—Josephine Milligan, M. D., Jacksonville, Ill.

OBSTETRICS—R. B. Murphy, M. D.

MEDICINE — Frank Parsons Norbury, M. D.

CLIMATOLOGY—Hubert Work, M. D., Pueblo, Colo.

PATHOLOGY AND BACTERIOLOGY—Rutherford Gradwohl, M. D.

PARIS CORRESPONDENT — Thomas Linn, M. D., Paris, France.

NEW YORK CORRESPONDENT — E. Franklin Smith, M. D.

LONDON CORRESPONDENT — R. T. Hewlettt, M. D., M. R. C. P., Chief Bacteriological Laboratory, Jenner Institute of Preventive Medicine, London.

MEDICINE.

BY FRANK PARSONS NORBURY, M. D.

Formerly Resident Physician Pennsylvania Institution for Feeble-Minded Children; Formerly Assistant Physician Illinois Central Hospital for the Insane; Physician to Oak Lawn Sanitorium and Passavant Memorial Hospital; Neurologist to Our Savior's Hospital; Lecturer Psycho-Physics, Illinois College.

AND EGBERT W. FELL, B. S..

JACKSONVILLE, ILL.

Empyema in Infants.— Bovaird (*Med. News*, December 23, 1899) calls attention to the frequency of this disease during the first two years of life. Of a series of 82 cases in children, only 13 were over two years old, 11 were under six months, and 40 between six months and one year. The mortality is high. The diagnosis and exploration is called for in every case presenting the rational signs of pneumonia, in which we find marked dulness or flatness over any part of the lung, and especially if accompanied by loss of voice or displacement of the heart. The effusion is frequently limited by adhesions. Drainage is called for, incisions being made preferably below or behind the angle of the scapula, but must be determined by the site of the effusion.

Cerebro-Spinal Symptoms in Influenza in Infancy.—(Westcott, *Arch. of Pediatrics*, January, 1900.) Epidemic influenza in infancy usually differs little from the disease in adults. It is frequently milder, but sometimes cerebro-spinal symptoms develop, giving the case a very grave aspect, and it is to these that the author calls attention. Case I.—An infant four weeks old, after a slight catarrh of several days' duration had a slight con-

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vulsive seizure, with failure of respiration, increasing stupor and a slow, weak pulse. Tense laryngeal spasm followed by apnœa occurred every quarter to half hour. The increasing weakness and failure of respiration merged into complete apnœa with cyanosis of surface and rigidity of limbs. These attacks recurred many times during the next two days. Vigorous reflex, excitation and artificial respiration were employed. Under treatment with atropine, digitalis, antipyrine and bromides the child recovered. The pathological condition seemed to be a limited œdema or congestion at the base of the brain, involving the respiratory and pneumogastric centers and the upper spinal meninges. Case II.—Infant, aged nine months. The first cerebral symptoms noticed were irritability and slight strabismus. Vomiting occurred and bowels became loose. Pulse weak, rectal temperature 100°, respiration 40, labored in character. The head became retracted and the neck stiff. Clonic spasms of the arms were followed by rigidity of all four extremities, which continued irregularly for several days, during which time the labored respiration and high temperature persisted. At times convulsive movements of the head, eyes and lips occurred, and rigidity of the entire body developed when the child was touched or moved. Throughout the trouble the abdomen was distended with gas and temporary improvement followed the removal of the dark green fecal matter by flushing. The slight pulmonary congestion cleared up, and the rigidity slowly disappeared. Calomel, digitalin, atropine and bromides were employed in the treatment.

Some Clinical Features of Rheumatoid Arthritis.—(Taylor and McKim, *Archives of Pediatrics*, November, 1899.) Rheumatoid arthritis is more frequent in girls than boys. The onset is gradual with pain and stiffness in one or more joints which enlarge, the adjacent muscles undergoing atrophy. The joints become affected in the following order: knees, wrists, cervical spine, ankles, elbows and fingers. The enlargement consists of a general thickening around the joint; fibrous adhesions are often present, but there is never bony ankylosis or suppuration. There is limitation of extension and rotation of the head. The lymphatic glands and spleen are involved, the glands near the affected joints being swollen, hard and painless, with no tendency to breaking down. Sweating is sometimes profuse, but bears no relation to the fever, which is usually slight. Etiology is obscure, and treatment of but little avail. The following points should be remembered in making the diagnosis: Chronic fibrous rheumatism is a sequela of acute inflammatory rheumatism. There are often valvular lesions, there is no enlargement of glands, the joints are tender to the touch, but may be very slightly changed in appearance. In arthritis deformans the cardiac and glandular lesions are short, pain and atrophy are present, and the shape of the bones, especially of the hand and foot, is entirely changed. Osteitis deformans consists of softening and thickening of the long bones and kyphosis. Heberdin's nodosities involve the phalanges and not the joints. Monoarticular deformans is seen only in old men. The following case of rheumatoid arthritis is from the Hospital for Crippled and Deformed Children: Female, aged eight; family history negative, and

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health good up to a year previous to presentation. Hygienic condition and food poor. Patient was suddenly seized by swelling, pain and stiffness of ankles and knees. There was rigid flexion and adduction of the thighs. Atrophy, malnutrition and anemia, were noted. Heart normal, and spleen just palpable. Post-cervical, submaxillary, inguinal, axillary and epitrochlear glands swollen. The phalangeal, wrist, elbow, and cervical vertebral joints became involved. Blood examination showed a slight anemia and eosinophila. Temperature ranged from 99°–100° F. Joint adhesions were broken three times without apparent benefit. Heating and massage with the administration of carbonate of guaiacol comprised the treatment, but little good resulted from it.

Scurvy in an Infant of Six Weeks.— Crandall (in *Archives of Pediatrics,* November, 1899) gives the age of most frequent occurrence in infancy, to be between the eighth and eleventh months. Cases have been reported as early as the fourth week. Very few cases have occurred in breast-fed infants, and in these same normal condition was present. The author reports the case of an infant of five weeks and five days. There was nothing in the family history to account for the trouble. A limp and painful condition followed by swelling, developed first in the left arm and then in right. There was no discoloration over the swelling, but the body was mottled. The head was inclined to sweat. The child was anemic, there was no bone deformity, pulmonary or cardiac disease. Temperature 99⅘° F. Both legs became involved, were drawn up, and were very painful. The child had been exclusively breast fed. Analysis of the milk showed a specific gravity of 1026, and per cent or fat, 2½. As the general condition and poor digestion made a radical change in diet unavoidable, the substitution of cow's milk was made gradually. The child recovered in two weeks, and the mother's milk having improved under treatment, was substituted for the artificial diet, but the reappearance of the symptoms demanded its withdrawal.

A Clinical Study of Laboratory Milk in Substitute for Infant Feeding. —(Starr, *Arcives of Pediatrics*, January, 1900.)—The advantages of laboratory milk are apparent. Absolute cleanliness and uniformity of composition are insured, but nevertheless the author's experience has been unsatisfactory. He has seen but few cases in which disturbance did not follow its continued use. In many cases the lowering of the general condition necessitated a change, and most frequently some acute disorder of dietetic origin was induced. A case is reported of acute gastro enteritis in a laboratory-fed infant, which yielded to the use of home-made mixture after the unsuccessful trial of laboratory milks of various percentages. A case of infantile scurvy, the result of laboratory feeding, yielded to the administration of orange juice, beef juice and a home modified milk. The author attributes the inferiority of laboratory milk to the fact, that all the fat is first removed and an artificial emulsion afterward made. This in some way lessens the digestibility of the proteids and leads to malnutrition or to an irritable diarrhea. In the home-made mixtures the basis is unseparated milk, a natural emulsion, and if carefully made it has all the advantages and none of the disadvantages of the laboratory product.

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Report of a Case of Scorbutus in an Infant.—Carr reports the case (*Medical News*, January 13, 1900) of a female, aged twelve months, who developed scurvy as a result of the use of prepared foods. The baby was lacerated, thighs and legs semi-flexed—thighs and ankles swollen, and the skin mottled. Skin at back of head was moist. The mucus membrane of the mouth was reddened and the gums swollen. The liver, spleen and heart were normal, and there was no albumin or blood in the urine. The patient recovered quickly under a diet of beef-juice, orange-juice, and a small quantity of fresh milk.

A Case of Chronic Interstitial Nephritis.—A clinical lecture by Wm. Osler.—Patient, male aged 16, passes six to seven pints of urine daily, containing albumin 1 per cent, and having a specific gravity of 1.005–7, acid in reaction and no casts. First symptoms noticed was severe headache in back of head. Patient had light attacks of tonsillitis, but no serious illness. The heart is hypertrophied, the arteries sclerotic; no edema. There is usually a history of infection, in this case tonsillitis; the kidneys become contracted, and hypertrophy of the heart and arterial sclerosis supervene. Prognosis bad. The treatment is a quiet life, non-irritating articles of food and an abundance of water.

A Case of Meningitis Due to the Typhoid Bacillus—Wentworth (*Archives of Pediatrics*, November, 1899) reports this case in a girl of four years, giving a history of loss of appetite, headache, fever and drowsiness. Physical examination showed nothing of importance except a coated tongue and slightly enlarged spleen. Urine contained a small quantity of albumin. The Widal test and lumbar puncture were negative. Two weeks after entering the hospital the child was very stupid, became unconscious, tonic and clonic convulsions and Cheyne-Stokes' respiration supervened from which she did not recover. The spinal fluid was at this time turbid and contained large numbers of bacteria, which the author decided were typhoid bacilli.

Incontinence of Urine in Children.—Huber (*Archives of Pediatrics*, November, 1899) formulates the etiology as follows: A neurotic factor is always present. (1) Malformation, such as small meatus, small bladder, etc. (2) Organic nervous disease, as idiocy, meningitis, myelitis. (3) Functional disorders, as chorea and hysteria. (4) Weak sphincter, resulting from lack of development, or from exhausting diseases. (5) Irritability of bladder, caused by inflammatory processes, stone, pin-worm, fissure of rectum, or distended bladder. (6) Deficient innervation. In the majority of cases if the cause can be discovered, the prospects of a speedy cure are good. If due to organic disease of the nervous system, or to malformations unamenable to treatment, the prognosis is bad. Many cases recover spontaneously at puberty. The treatment varies with the cause. The general health should be improved by tonics, sponging, massage and outdoor exercise. The bowels should be regulated and the urine examined for abnormal products. The evening meal should be light, and no coffee or tea allowed. If reflex irritation exists it should be removed. Tincture of belladonna at bed-time, and iron and strychnia three times daily are often effective. Punishment and scolding should be avoided.

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Society Proceedings.

BRAINARD DISTRICT MEDICAL SOCIETY.

STENOGRAPHICALLY REPORTED FOR THE MEDICAL FORTNIGHTLY.

(CONTINUED FROM PAGE 192.)

The paper of Dr. Brittin on "Atypical Cases of Typhoid Fever," was read by the Secretary. After quoting the definition of Dr. Osler, and the remarks of Dr. Bartlett, in 1842, that "there is no one symptom, there are no two or three symptoms, which in themselves are characteristic of the disease; or which, usually occurring, may not be absent during its entire progress." Dr. Brittin called attention to the probable frequency of errors of diagnosis when the disease occurs in young children, owing to its mild course in these cases. It is not improbable that many cases of so-called catarrhal fever are true typhoid. The term, typho-malarial fever, first used by Woodward during the Civil War has been greatly over-worked and used to cover an uncertain diagnosis instead of the combination of typhoid and malarial infection, as intended by Woodward. While the two infections may co-exist, these cases are rare outside the tropics. When typhoid fever first appeared among our troops in 1898 it was called typho malarial; but when its ravages became serious, the bacteriologist's examination at once showed it was typhoid alone. We need laboratory facilities in our smaller communities where these tests can be promptly made and these diagnoses rendered clear and certain. We should suspect any continued fever which resists quinine, and is attended with marked prostration, loss of appetite, coated tongue, either constipation or diarrhea, and well-marked nervous symptoms. Such cases should be treated as typhoid, not waiting till the most serious symptoms present themselves.

Discussion.—DR. PITNER.—Most cases of continued fever are really typhoid, even though at first they resemble malarial fever. It is a common symptom in atypical cases to have remissions of temperature at first. The commonness of the disease makes this a very common error, hence the use of quinine and other disturbing drugs and a careless dietary. I do not like the therapeutic test by quinine. Patients have often tried this themselves before consulting a doctor. It is better not to make a positive diagnosis at first, but to insist on waiting till a certainty is possible before announcing your opinion; but treat it as typhoid till we can be certain. A malarial case will show some periodicity. The tremor of the tongue, unsteadiness of muscles, often denied by the patient when questioned, perhaps a slight deafness, mark the nervous condition. The tongue may be white all over, but it is a thin coat disappearing as the disease progresses. We may not find tympanitis or diarrhea, at first. General malaise has preceded. The pulse is not frequent, as in malaria, in proportion to the fever. It is generally below 100, but with a quick stroke. There is often insomnia. Sometimes the rose-spots do not appear. The best treatment, as in the marked cases, is by mild intestinal antiseptics, and careful diet.

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DR. HURST.—Some atypical cases have a subnormal temperature and the rose-spots are not always found, though possibly they occur, but fade so rapidly that the physician has no chance to see them. Not all cases of continued fever are typhoid. I have seen continued malarial fever with none of the symptoms of typhoid, except slight tympanitis. Have seen no injurious effect from quinine, even in typhoid cases, and would begin treatment with it. It is a fact, that sometimes the microscope shows that the two infections exist together, and Woodward's name is not a misnomer if used as he probably meant it. All continued fevers here need quinine at some stage of their progress.

DR. HAIRGROVE.—The symptoms of typhoid are those of toxemia. An eliminative treatment is indicated, as by calomel and antiseptics I, too, have failed to find rose-spots. Cold water is not so much antifebrile as cleansing, and does its work when applied in these cases by the cleansing effect on the skin, and through this on the deeper tissues.

DR. MILLER.—During the past fall I cared for a very atypical case of typhoid in the White Mountains. The young lady had come to the mountains to escape hay fever, stopping for a little visit at Gloucester, Mass, on her way. She had an attack of cholera morbus before leaving home, caused by slight indiscretion in diet. Her digestion was poor, as a result of the Hayes cure (?) for hay fever. Diarrhea recurred at Gloucester from getting very tired, but improved from remedies used, and on arriving at the mountains she thought herself well, except for weakness. After four days she overtaxed herself in sight-seeing and diarrhea and nausea returned. Her stomach refused to retain the remedies she had with her, and I was asked to see her. Her skin was cool, and she thought she had had no fever. The nausea yielded to frequent minute doses of cup. ars. The next day she was comfortable, but weak, and had temperature 102°, pulse, 110. (She had suffered greatly from irritable heart some years before.) On the next day the temperature was down to 99.2° in the morning. The tongue was pointed and red at the edges. No abdominal tenderness, but some backache, and that evening the temperature rose to 104° in the mouth and 105° in the rectum. Next morning it was only one degree lower, and for three days it maintained this record, being at no hour below 103° in the mouth, and at least a degree higher in the rectum. The case pursued a very irregular course; a very dry tongue was a great trial to the patient, and the recurring nausea made nourishment a difficult problem. Trophinine proved a most helpful preparation. For about ten days the nourishment was largely rectal. Beef peptonoids, salted milk with eggs were used, and without such measures the result would have been unfavorable, in my opinion. The temperature varied wildly, at its lowest anywhere from 4 A.M. to 9 P. M., highest sometimes at noon, and perhaps next day not at its maximum till midnight. The pulse was about 120 to 130 most of the time. The sulpho-carbolates were rejected by the stomach; salol was out of the question also. Calomel was used to keep the bowels free, and guaiacol carb. during the first ten days. Strychnine was given rather freely almost from the first, and some digitalis, but only

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in very small doses. The greatest tenderness was near the gall-bladder. Delirium and tympanitis were slight, though the latter persisted into convalescence. Rose-spots were not discovered till the third week of the fever and lasted only a few hours. No alcohol was given, but the patient found its use after the sponge baths very refreshing, and a little was lightly applied to the skin after nearly every bath. This probably prevented bedsores. Turpentine was given in capsules, three drops every six hours for about a week. There was little complaint of headache, but much of "cinchonism," and the patient could scarcely believe that she was not taking quinine. After the second week Aulde's nuclein was given rather freely. It never disagreed with the stomach, but how much it contributed to a good result I am uncertain. The temperature touched normal daily after the third week, but did not remain normal throughout the twenty-four hours till the fifth week. After a rather protracted convalescence there is complete recovery.

DR. BLACK.—Rose-spots will nearly always be found if carefully sought, and are very diagnostic.

DR. H. W. SMITH.—Nearly all cases of typhoid that I have seen have been atypical in some way. Have seldom seen rose spots. Combined forms of fever are certainly seen.

DR. VERTREES.—I have seen a number of cases of typhoid with malaria, e. g., fever dropped suddenly to normal, then rose to 103° in P. M., fell to 101° A. M., 103 again next P. M. Full doses of quinine checked it entirely and at once. An eliminative treatment is always good, and I have never seen any harm from quinine. When men like Strumpel acknowledge they cannot always diagnosticate typhoid at once, we may feel warranted in delaying a positive diagnosis. I like the effect of the Woodbridge tablet, No. 2, in most cases.

DR. DUNCAN.—In the hospital it was a common saying, that while rose spots were taught as a sign of the disease they were seldom seen.

DR. HAIRGROVE.—The spots are too evanescent to be regarded as pathognomic.

DR. BLACK.—In H. Nothnagel's clinic rose spots were found in 75 per cent of cases, and he regards them as a most valuable sign.

DR. PITNER.—It is certain that when found the spots are very positive evidence of typhoid. This sign does not appear in any other disease, while in typhoid it occurs generally at some period of the disease and on some part of the body.

DR. MURPHY'S paper on "Placenta previa" was read in his absence, by Dr. Black. In this condition hemorrhage is unavoidable. It generally begins about the seventh month and attacks recur at intervals and in varying quantity. If the pregnancy is not interfered with when labor really begins the hemorrhage becomes profuse and increases with each pain. Last April I was called to a case, Mrs. R. five months pregnant, a moderate hemorrhage had occurred two days before, and the doctor had suggested immediate delivery, which was refused. The uterus had a small elongated

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neck, but slightly dilated. The vagina contained many small clots, partially decomposed. After a cleansing douche with boric acid solution I packed the vagina firmly with gauze, directing that after forty-eight hours they should call their physician and let him do what might be indicated. Gave codeine gr. ¼ every hour to produce sleep, The patient insisted on my attendance and had notified the other doctor so after forty-eight hours I removed the packing, douched and repacked. A week later hemorrhage began more severely than before. Giving codeine to quiet the patient I introduced the airbag to dilate the narrow os. After a few hours this was expelled. Dilatation still slight. Airbag again applied and chloroform given, but results were not satisfactory. The bleeding was not severe. I now introduced my index finger and with steady pressure waited. Presently could introduce the tip of another finger and so gradually dilated till all four fingers could be used. Chloroform was given. The neck thinned and at last the entire circle of the centrally inplanted placenta could be felt. Gave a hypodermic of ergot and strychnia and after twenty minutes detached a little of the placenta and ruptured membranes. Pains now came on and pushing the placenta to one side I reached the feet and brought down the child's body into the cervix. Nature was able to complete the labor safely. Good contraction followed and the patient recovered without a particle of fever. Authorities to the contrary notwithstanding, it is certain that at times the finger is the best dilator, mechanically speaking, and may be a safe one if made as aseptic as possible.

DR. KREIDER.—Spoke on "Seventeen cases of tuberculosis of the spinal vertebrae." Ten cases were males, 7, females. Age, 2 to 60 years. The cervical region was affected in 4, the dorsal in 7, the lumbar in 6. The case presented to this society by Dr. Cargill illustrates how one may fail to see the real seat of the trouble. After all my attention to such cases I failed to recognize this one, but Dr. Ryan at once pronounced it disease of the second and third cervical vertebrae. A child aged four had such sinuses about the neck. It was wearing a jacket and jury-mast. The mother removed this one night; the child's head fell forward and it died instantly. Probably the odontoid process pressed the medulla. Another child in similar condition is now well. A German woman, aged 35, with a cervical disease has passed from observation. Of the dorsal cases, one had numerous sinuses, of five years' duration. Both parents died of consumption. Plaster had been applied, but not efficiently. Treatment with the jacket and jury-mast was successful.

In another, aged 17, great deformity existed. On trying to reduce this and apply a jacket, I washed out the sinuses with hyd. perox. The foam came from the mouth and made it evident that the attempt was useless. Death followed in a few months.

Boy, aged 14. Seen several years ago. Tried to drain the cavity. Unsuccessful. Girl, aged 10. She had fallen from a porch. A mass was found near the kidney. Dislocation of the kidney seemed possible, though there was some fever. No deformity. Some time later kyphosis appeared. Dr. Ryan put her in a jacket and she is well.

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Boy, age 18. He fell from a car and injured his back. He was treated for gastric trouble.

Man, aged 60. Diagnosis not previously made, though he had been suffering some time and did not live long after this.

(Secretary failed to get data of seventh case.)

Lumbar cases. These may exist a long time without deformity.

Dr. S. Operation with drainage and prolonged rest on a water-bed led to recovery. He went west and continues well.

Boy. He was treated for typhoid fever before an accurate diagnosis was made. The disease was very acute and he only lived three months. Boy, aged 14. There were posterior openings near the sacrum and an anterior one near the appendix. Peroxide went through, but did no good. He was kept in jackets and the sinus was let alone. He recovered.

Boy, aged 17. Brought to the hospital with what looked like appendicitis. He could not work long at a time, had nose-bleed often, tongue clean, bowels regular, severe pain in head, probably meningeal. The mass near the appendix was psoas abscess. These should not be interfered with unless they threaten to break in some inconvenient or dangerous place, or if the pus after a time shows no sign of being absorbed. This man is now rather smaller, and pulse and temperature are better.

Girl. Operated on for appendicitis by another surgeon. Soon after the proper diagnosis was made she died of cerebro-spinal meningitis.

(Secretary failed to get data of two lumbar cases.)

Plaster is a very convenient material for making the jackets. It must be applied over a knit shirt with padding over bony prominences. Apply the plaster well down over the hips, and strengthen by four strips of shaving or very thin wood. Use the jury-mast for all cases above the lumbar region. Do not change them often unless the patient grows rapidly or straightensvery much. A bath may be given with a swab of cotton wet with alcohol and wrapped on a probang. At first the jackets may need to be changed oftener than later in the case. Rest in bed is very valuable with tonics and every attention to the general health.

DR. BLACK.—These cases often begin slowly and the patient does not give a clear history, rendering diagnosis difficult. Often, too, other troubles coexist. Possibly in the case mentioned the surgeon who operated for appendicitis found what he sought.

Plaster is the most adaptable material for support, but other methods are lighter, if not better. Why should we lay aside in these cases the general surgical maxin to evacuate pus when it can be done without injuring other organs than those already diseased? Why wait for the pus to be absorbed? It seems to me it would be better, if we can make an early diagnosis, to open and drain the abscess if we can reach the seat of the disease so as to drain thoroughly. We do not include the spine often enough in our routine examination of patients. We cannot always determine where the disease originated. In the case presented to the secretary by Dr. Cargill there was certainly disease of the left mastoid, and I regard the vertebral trouble as secondary. There has never been much discharge of

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pus in this case. Sinuses have followed around the base of the skull to the opposite side. It was primarily an osteo-myelitis of the temporal bone, the mastoid portion. We must often base our decision as to which was the primary lesion, the history rather than on the condition which we find.

DR. KREIDER.—The case of "appendicitis," so far as I have learned, did not lose the appendix in the operation. Pus was let out and the cavity drained. As to applying ordinary surgical principles, many cases are recorded where good drainage has been had for a long time without healing of the vertebræ.

DR. CROUCH.—Among my early cases was a child three years old who had been treated for kidney disease. His spine was rigid and he bent the knees instead of the back when stooping I found a slight projection at one vertebræ. Plaster was applied, but was not satisfactory, so used the appliance suggested by Dr. Steele of St. Louis. An oblong frame was made from bars of iron three-fourths inches wide. This was a little wider and longer than the child. To this was attached canvas strips on which the boy was laid on his back. Felt was glued to the cast to prevent pressure on the tender vertebra. On this hammock the child was kept for fourteen months. At one time there was flexion of the right limb and irritability of the psoas. The cast was made from light sole leather, punctured, soaked and fitted over a plaster cast of the child. The frame was arranged so it could be fastened to the trucks of a baby buggy and so the child was taken out of doors. The portable hammock was very convenient. The child is now well and the deformity has not increased since discovered.

As some were obliged to leave to take a train, by consent the discussion was interrupted to hear the report of the committee appointed to memorialize our congressmen. The following resolution was offered by the chairman of the committee, Dr. F. P. Norbury, and was on motion unanimously adopted:

Inasmuch as there have been introduced into the Congress of the United States measure calculated to restrict and unnecessarily to interfere with scientific investigation as now pursued within the bounds of humane vivi-sectionas, such legislation, if enacted, will interfere with the pursuit of medical and scientific enquiry, thereby directly or indirectly affecting medical and surgical progress; therefore

Be it resolved, that we, the Brainard District Medical Society of Illinois, respectfully request the Senators from Illinois and the members of the House of Representatives from the respective districts covered by this Society, to lend their support and power to suppressing such legislation;—first, because such legislotion is founded upon prejudice and is unscientific; second, such legislation will directly interfere with the progress of medicine and surgery, so essential for the welfare of mankind.

On motion the Secretary was directed to send a copy of this resolution to each of the persons indicated.

Discussion Resumed.—DR. HAIRGROVE.—This disease is generally spoken of as tuberculosis of the vertebrae, because it is commonly tuber-

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culous, but it is not always so. In small cold abscesses it may not be best to open, but generally absorption causes fever, etc. The infection is generally mixed. Tuberculosis alone is not so formidable. The admixture of streptococci or staphylococci renders the case much more active and severe. Reposition and rest are the cardinal points of treatment.

DR. NEWCOMER.—A child suddenly lost the use of the left lower limb, following an illness. There was no deformity nor tenderness, although the anterior columns of the cord were affected. Electricity brought some improvement in the gait. Dr. David Prince examined the child and found no sign of Pott's disease. After some months a projection appeared. Plaster was used, but excoriations were caused, and Dr. Andrews applied some other form of support. The child is now in good general health. When we see loss of power without deformity, shall we expect to find Pott's disease?

DR. NORBURY.—Our diagnosis must be based upon the considerations, the history including the family and heredity, the fact of traumatism, the condition of the lymph vessels and the presence of the bacillus, and the use of tuberculin. We have in this an agent enabling us to make an early and positive diagnosis. It is without danger if used with care. Why should it not be used in these cases as in suspected tuberculosis of the lungs?

DR. BLACK, representing the Morgan County Medical Society, invited this Society to participate in an open meeting of the Societies of this part of the State to be held early in April to discuss various topics of State Medicine. Dr. Fisher moved that this Society accept the invitation and that Dr. Hurst represent this Society on the program. Carried.

On motion, Society adjourned.

KATHERINE MILLER, Secretary.

ILLINOIS STATE MEDICAL SOCIETY.—The annual meeting of this Association at Springfield promises to be the most important in the history of medical organization in Illinois. Every doctor in the state should be a member, and every member should attend the meeting. An interesting program is being prepared. Date May 16, 17, 18: place of meeting, Springfield. Our next issue will contain preliminary program.

MAHN & CO., SURGICAL INSTRUMENTS.—During the past four years the manufacture and sale of surgical instruments and hospital appliances in St. Louis has experienced a boom, which is probably equaled in no other line of business. Five years ago this business was easily handled by the two principal houses then doing business; now there are seven, and all are working overtime and behind with orders. The opening of a retail department by Mahn & Co. will tend to relieve the congestion. This firm has been manufacturing for the trade only for something better than twelve years, and the profession will appreciate the opportunity of dealing with the manufacturer. Their retail department is in charge of Mr. F. J. Berger, who has been so long identified with the A. S. Aloe Co. that he has seemed an essential part of that concern. Under him it is certain the new venture will be an entire success.

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MORGAN COUNTY MEDICAL SOCIETY.

JACKSONVILLE, ILL., April 12, 1900.

PROGRAM.

"History of Our Medical Laws, City and County and State," by Dr. A. C. Corr of Carlinville, representing the Macoupin County Medical Society.

"Efficiency of Our Health Laws," by Dr. S. T. Hurst of Greenview, representing the Brainard District Medical Society, and Dr. H. W. Chapman of Whitehall, representing the Western Illinois Medical and Surgical Association.

"Efficiency of Our Laws Relating to Medical Education and Practice," by Dr. W. E. Gilliland of Coatsburg, representing the Adams County Medical Society; Dr. L. R. Ryan of Galesburg, representing the Military Tract Medical Society, and Dr. E. M. Eckard of Peoria, representing the Peoria Medical Society.

"Powers and Limitations of Board of Health Under the New Act," by Dr. J. A. Egan of Springfield, Secretary of the Illinois State Board of Health, and representing the Sangamon County Medical Society.

"Local Medical Societies and Their Relation to District and State Societies," by Dr. W. T. Moffett of Williamsville, and representing the Sangamon County Medical Society.

"The Relation of Medical Societies to City, County and State Medical Offices," leader to be announced.

Besides these representatives of societies who have volunteered to present papers introducing the topics, the following have been spcially invited to participate in opening the discussions:

Dr. Charles B. Johnson of Champaign, Dr. Harold N. Moyer of Chicago, Dr. J. T. McAnally of Carbondale, Dr. Weller Van-Hook of Chicago, Dr. Edmund W. Weis of Ottawa, Dr. B. B. Griffith of Springfield, Dr. George N. Kreider of Springfield, Dr. J. W. Petitt of Ottawa, Dr. C. W. Hall of Kewanee, Dr. E. J. Brown of Decatur, and Dr. John H. Miller of Pana.

The morning session will begin promptly at 10 o'clock, and the afternoon session at 1:30 o'clock.

JOSEPHINE MILLIGAN,
EDWARD BOWE,
CARL E. BLACK,
Committee.

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The Medical Fortnightly.

Issued Tenth and Twenty-fifth of Every Month by the Fortnightly Press Co.

UNDER THE EDITORIAL DIRECTION OF

FRANK PARSONS NORBURY, M. D. AND THOS. A. HOPKINS, M. D.

Secretary: CHARLES WOOD FASSETT, M. D.

A COSMOPOLITAN BIWEEKLY FOR THE GENERAL PRACTITIONER

Editorial Offices in St. Louis, Chicago, Cincinnati, Jacksonville, St. Joseph, Kansas City, and Pueblo, where specimen copies may be obtained and subscriptions will be taken.

Address all business communications to the Fortnightly Press Company.

Address all contributions and books for review to the Editors, Suite 312, Century Building, Saint Louis.

Paris: U. S. Press Building, Espanade des Invalides, Paris Exposition.

Volume XVII **APRIL TWENTY-FIFTH** **Number 8**

Editorial Department.

Medical Legislation.

THE meeting held April 12, in Jacksonville, Illinois, under the auspices of the Morgan County Medical Society, was profitable and encouraging to the progress of medical legislation. The subjects discussed gave new views to many regarding the perplexing problems which committees have to confront when new legislation is proposed. Especially was it emphasized that legislation is not an infallible panacea for all the wars of quackery, irregular practice and medico-religious beliefs. With all the care and thoughtful preparation of desirable bills for legislative enactment there always is to be considered that inevitable possibility, a legislative committee amendment, which is sure to destroy or render innocuous certain parts of a law, so that it fails to accomplish the purpose for which it was intended. The existing situation in Illinois, as developed since the passage of the Practice Act in 1899, shows, that while the law is good, wholesome and water-tight in most of its compartments, yet, it is imperative, and more so than ever before, that we have speedy and suitable legislation to control some of the errors of the Pardiggles, of the last legislature, found in this bill.

We have not yet been convinced, however, that the christian scientist clause of the present bill is or was a political necessity. On the contrary, we believe it was a successful bluff of the christian scientists, who sought and succeeded in playing a checkmate worthy of Napoleon. The Christian Science Strategy Board simply went one better than the physicians and bottled up all opposition. This clause, a survival of mediaeval credulity, virtually is a confession of weakness and failure to accomplish a purpose supposed to be easily within the grasp of the honorable profession of medicine.

The christian scientists worked some of Frederick the Great schemes of strategy so freely used by the Boers, took in all opposition and calmly laughed up their sleeve. Their schemes suffice to show what wretched stuff is hashed up by the legislation of edification of an intelligent people;

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a mystified people whose minds have their rational faculties dwarfed, stunted by being constantly under the ban of credulity. The guardian devil played on his barbed wire harp while the other demons had a cake-walk to celebrate the victory of fraud over reason. But the medical men of Illinois will yet surely win out; it will be a slow and tedious battle. Truth is mighty and will prevail. It will take persistent effort and several boards of strategy to finally carry the day. It is necessary for every physician in Illinois to shoulder a Mauser and go out for game. It is not a practical joke that we are trying to play, nor are we toying with a few cracked-brained fools. No; the paranoiacs of christian science can reason as cleverly and are as long-headed as was Joubert; they simply reason from a false premise. Nothing but education can overcome this. So let us have a campaign of education.

We think it useless to criticize the failure of legislation—that is passed—we were simply "out-generaled." Now, it is time to retake our old positions and fight for a purpose. Drop personalities, combine forces and sail in. Eureka and Excelsior will finally be inscribed on our banners. We are in to win; we will win. F. P. N.

Christian Science Absurdities.

AT a lecture delivered at the Broadway Tabernacle, New York, before the class for the discussion of present-day problems, William A. Purrington, a lawyer, recently laid bare the sophistries and absurdities of "christian science" and faith healing. In doing so, he indulged very little in personal comment, but selected his arguments from a consideration of the various statements made by Mrs. Eddy and others high in her "church." He characterized this so-called faith as a product "of ignorance, irreverence, vanity, vulgarity, inconsequence, incoherence and greed," and asserted that "christian science" is the presumptuous assertion that in 1866 God revealed to a chronic, hysterical invalid certain truths that for centuries He has hidden from priests and scholars. Like the discoverer of Mormonism, she has a body of apostles, called the Board of Lectureship of the First Church of Christ, Scientist. The lecturer declared that "the cause of the growth of 'christian science' lies in the false pretense of the Eddyites to a peculiar divine power of healing all men of human infirmity." It is a well-settled law, however, that the individual's right to believe does not imply a right to manifest bizarre belief in acts injurious to the physical and moral welfare of others (*Journal A. M. A*). And yet, it seems that Illinois as a State smiles upon the "ignorance, irreverence, vanity, vulgarity and greed" of christian science; legalizes it as a political necessity, and says, with Boss Tweed, "the people be d——d" The absurd position which Illinois has taken in this agitation is as logical as that of Tweed, only Illinois says, "the children and helpless sick be d——d; it is a political necessity that made this clause exist." Medical legislation, so we have been told, is primarily for the people, and yet, children who are part of the stupendous whole, are ignored to satisfy not the people, but the exigencies of politics, and the end is not yet. F. P. N.

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Rheumatism.

WITHIN the past month rheumatism has been exhaustively studied and discussed, both in the London and New York medical societies. Dr. Canton before the Clinical Society of London, presented a paper, in which he discussed the prevention of cardiac complications. Canton's plan of treatment is in brief as follows: Absolute rest in bed for several weeks; series of fly-blisters in the course of the first, second, third and fourth dorsal nerves, followed by a poultice; sodium or potassium iodide, gr. 3 to 10, t. i. d. Sometimes small doses of mercury were given.

Omitting all cases of slight transitory bruit, all of hemic origin, and all which seemed due to weakened or dilated ventricle, eighty-five cases with distinct signs remained. Of these fifty-four patients had a bruit on admission, probably of recent origin; twenty-four of them left with sound hearts, and twenty with valvular disease. Out of thirty-one cases in which complications came in hospital, or had been observed just before admission by the practitioner attending, twenty-seven left with apparently sound hearts, three with valvular affection, and one remained under treatment. Dr. Canton believes that there is a brief stage in endocarditis when treatment is effectual, and in adults this does not last longer than two or three weeks, though in children it is longer.

Persistent rest is the most important measure, but he holds that there are more recoveries when all three are persevered in for at least six weeks. The bruit becomes softer, variable, and eventually vanishes. It is, however, advisable to avoid active exertion for a farther two months (*Med. Record*).

Ewart before the Chelsea Clinical Society, gave an exhaustive *resume* of rheumatism, discussing its prevalence, mortality, preventability, infectivity, cardiac complications and various methods of treatment. In the discussion which followed, Maclagan advocated the use of salicin, saying it has an absolutely curative action on both joints and heart. Salicylates act on the heart as well as on the joints. The difference is that the heart recovers more slowly, because we cannot give it the absolute rest that we can to the joints.

The general consensus of opinion advanced in this discussion was that the salicylates offered the most reliable results; that the blister should not be used in nervous cases, especially women and children, but that the blister will give the greatest relief to a rheumatic joint, also, that if applied over the heart it would quiet it.

The New York Academy of Medicine section on medicine, had recently presented a series of papers discussing rheumatism. Dayton (*Med. Record*, April 7, 1900) spoke of the treatment of rheumatism at the New York Hospital. In brief it is as follows:

1. In acute articular rheumatism: bed, cathartics, milk diet during the acute stage, sodium salicylate by mouth or rectum, combined with sodium bromide if cerebral symptoms follow the administration of that drug, and methyl salicylate locally. In the later stages the methods employed in the subacute form are used.

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2. In subacute articular rheumatism: bed if symptoms are severe, fairly liberal diet, alkalies or potassium iodide internally, methyl salicylate locally for the relief of pain, and the hot-air bath for stiffness or peri-articular enlargement.

3. In chronic articular rheumatism: nutritious diet, alkaline waters in large quantities, potassium iodide or alkalies, and the hot-air bath.

4. In muscular rheumatism: salol and phenacetin internally; locally, methyl salicylate, the cautery, or belladonna.

In conclusion, the author called attention chiefly to the use of sodium bromide in combination with sodium salicylate for combating cerebral symptoms and permitting larger dosage; to the hot-air treatment in subacute and chronic rheumatic conditions; and to the value of local treatment by methyl salicylate, which possesses the following advantages: (1) Rapid relief of pain; (2) avoidance of gastric irritation.

During the same meeting Dr. Satterwaithe spoke of the "Hot-air Treatment of Chronic Rheumatism (*Med. Record*). He said it was an old treatment, but modernized by the use of new apparatus. He quoted Dr. George L. Kessler, of Brooklyn, who after an extensive experience with the method, had drawn the following conclusions as to the effect of the treatment: (1) It produced contraction followed by dilatation of the superficial blood-vessels; (2) the pulse becomes more rapid, but at the same time its strength was improved; (3) the bodily temperature rose from one to six degrees, and the accompanying perspiration was profuse and acid; (4) the respirations were also increased; (5) nerve exhaustion was experienced if the treatment was too prolonged. The limb should be snugly swathed with about four thicknesses of blanketing or Turkish toweling. If this was not snugly applied, the perspiration might lodge between the toweling and the skin and cause blistering of the skin.

Other valuable papers were read at this meeting, all showing a wide interest in this subject. F. P. N.

Rheumatism of Childhood.

RHEUMATISM as it occurs in children differs clinically from the disease as it appears in adults. For this reason it is of interest to discuss its clinical features and treatment, and inasmuch as we have had several inquiries from our readers regarding rheumatism of childhood we have invited several well known writers to contribute short articles on the subject, these are to be found in this and subsequent issues. The discussion of the clinical features of this disease will be of special value at this season of the year. We hope to make clinical discussions of seasonable diseases a feature of the FORTNIGHTLY hereafter.

DR. J. MANNING ROBERTS, representing Armour & Co. of Chicago, is detailing a selected list of the local profession in behalf of Armour's Animal Extracts. He reports a most encouraging increase in interest in animal therapy throughout the Mississippi Valley.

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The Reviewer's Table.

Books, Reprints, and Instruments for this department, should be sent to the Editors, St. Louis

POTT'S NERVOUS AND MENTAL DISEASES. A Pocket Text-Book of Nervous and Mental Diseases, by CHARLES S. POTTS, M. D., Instructor in Electro-Therapeutics and Nervous Diseases in the University of Pennsylvania, Philadelphia. In one handsome 12mo. volume of 442 pages with 88 illustrations. Cloth, $1.75, net. Flexible red leather, $2.25, net Philadelphia and New York:—LEA BROTHERS & CO. February, 1900.

THIS WORK, the seventh volume of Lea's Series of Pocket Text-Books, furnishes a concise exposition of the most modern knowledge of its two separate but closely allied subjects. The histology of the nervous system have been discussed in a manner essential to the understanding of the pathological conditions and symptoms arising therefrom. Full attention is given to matters of general symptomatology and methods of examination, and therapeutic measures both medicinal and non-medicinal are thoroughly discussed in the light of the most recent discoveries and achievements. Although especially useful for students this work will prove of great value to practitioners, posting them thoroughly in the most recent points regarding a class of diseases which are exceedingly common and important, and often puzzling. The work is well illustrated and very moderate in price.

HISTOLOGY AND PATHOLOGY, by JOHN B. NICHOLS, M. D., Demonstrator of Histology, Medical Department Columbian University, and F. P. VALE, M. D., Assistant in Pathology, Medical Department University of Georgetown, Washington, D. C. In one handsome 12mo. volume of 432 pages, with 218 illustrations. Cloth, $1.75 net. Flexible red leather, $2.25 net. LEA BROTHERS & CO., Philadelphia and New York.

THIS VOLUME presents compactly, clearly, authoritatively and at a very moderate price, the essentials of two important subjects which illuminate each other. The normal structure of the tissues is a standard by which morbid changes can be recognized and measured. Pathology steps in after Histology, and regarding each disease as an entity, describes its nature, signs, course and effects, thus yielding an understanding indispensable as a prerequisite to the practice of medicine. Drs, Nichols and Vale have summarized these two sciences in their interrelations, and have presented a manual which is handsomely illustrated, thoroughly up-to-date, and serviceable alike to the practitioner and the student.

INTERNATIONAL CLINICS. A Quarterly of Clinical Lectures on Medicine, Neurology, Surgery, Gynecology, Obstetrics, Ophthalmology, Laryngology, Pharyngology, Rhinology, Otology, and Dermatology and Specially Prepared Articles on Treatment and Drugs. By Professors and Lecturers in the Leading Medical Colleges of the United States, Germany, Austria, France, Great Britain and Canada. Edited by JUDSON DALAND, M D., Professor of Clinical Medicine in the Philadelphia Polyclinic. Vol IV. Ninth Series. 1900. Published by J. B. LIPPINCOTT CO., Philadelphia. 1900.

THESE clinical papers and lectures illustrate the value of clinical teaching even to practitioners. This volume, with thirty-seven distinct articles, covers a wide field of medicine and presents the latest methods of treatment, so that physicians who are fortunate in being subscribers to this valuable series of lectures can be in touch with up-to-date methods. Clinical teaching is the essential successful method of imparting knowledge, and when well-known authorities are the teachers, such a work as this, is invaluable.

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Favorite Prescriptions

Persistent Hiccough.—

℞ Strychninæ sulphat..... gr. $\frac{1}{40}$
Camph. monobrom..... gr. $\frac{1}{2}$
Hyoscyaminæ..... gr. $\frac{1}{60}$

Sig. For one dose. Repeat according to indications.—*Med. News.*

Reliable Purgative Pill.—

℞ Aloini.....
Resinæ podophylli.....aa gr. iv
Ext. nucis vomicæ..... gr. vj.
Piperini..... ..... gr. iv
Ipecacuanhæ pulveris..... gr. ij
Ext. leptandræ, q. s.....

M. ft. mas. et in pill. No. xxiv div. Sig. A pill at bedtime.—Koenig, *Penn. Med. Jour.*

Hemorrhoids.—Dr. Gratiania Catasus treats hemorrhoids by the sclerogenous method. The following is the technique he employs: Thorough cleansing with soap and water of the hemorrhoidal growth. They are then to be anointed with iodoformed vaseline. In the base of each tumor is injected a hypodermic syringeful of the following solution:

℞ Aqua dist..... 20.00
Zinc chloride..... 0.50
Cocaine hydrochlorate..... 0.20

The patients do not experience any pain; on the next day there appears around the site of injection an inflammatory reaction and some induration. This disappears in the course of from four to six days. One injection ordinarily suffices.—*Med. Standard.*

Tubercular Syphilides.—Ohmann-Dumesnil (*St. Louis Med. and Surg. Jour.*) suggests the following local applications for tubercular syphilides:

℞ Acidi salicylici..... gr. 20
Ichthyolis..... oz. ½
Ung. aquæ rosæ..... oz. I

M. Sig. Apply thoroughly twice a day.

If there be objections to using an ointment, the following, which is but a type of preparations to use, will be found very efficient. It is dry, waterproof, and not easily removed by friction:

℞ Acidi salicylici..... gr. 20
Cocaini muriatis..... gr. 4
Traumaticini or collod. flex..... oz. I

M. Sig.: Paint on affected parts twice a day.

After the disappearance of the skin symptoms a bland ointment should be applied at night. An excellent one is the following:

℞ Hydrargyri chloridi mitis..... dr. ½
Ung. aquæ rosæ..... oz. I

M. Sig.: Apply thoroughly at night.

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Original Department.

PAPERS for the Original department should be in hand one month in advance, and contributed to THE MEDICAL FORTNIGHTLY exclusively. A liberal number of extra copies will be furnished authors, and reprints may be obtained at reasonable rates, if request accompanies the manuscript. Engravings from photographs furnished free.

Contributions, and books for review, should be sent to the Editors, 312 Century Building, St. Louis.

☞ Signature of contributor, for reproduction, should be sent with every article, on a separate slip; use heavy ink, and allow autograph to dry without applying blotter.

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Medical Laws and Medical Organization in the State of Illinois.

A SYMPOSIUM — ARTICLE I.

The Relation of Our Laws to Medical Education and Practice.

BY E. M. ECKARD, M. D.,

PEORIA, ILL.

Representing Peoria Medical Society.

Read before the Morgan County Medical Society, April 12, 1900.

REGARDING the efficiency of our (Illinois) laws relating to medical education, I have little to say. My views are very decided on that point, and to express them, necessitates plain speaking. The fact that the law permits one class of men to obtain a license after a few month's study of bone and muscles, the said license permitting them to treat all manner of disease from a bone standpoint; while it requires another class to complete a study of not less than three years' duration and to master a large number of branches in order to obtain a license apparently no greater in its scope, appears to me ridiculous and plainly an injustice. The law might prove always effectual provided a courageous board of officers, such as the present incumbents, were appointed to conduct the examination, but how about appointments which carry with them political domination? For

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instance: Mr. Politician might say to Mr. Governor, "Here is my friend, Mr. Bonebreaker, who will shortly appear for examination before your State Board of Health. See that he is successful." Mr. Governor says to Mr. Board of Health, "Mr. Bonebreaker will appear before you for examination in that department of medicine called 'Shampooing.' Read well section 2 of the Medical Act, and see that he receives a license. A word to the wise is sufficient." Mr. Board of Health may not believe Mr. Bonebreaker efficient to practice medicine, but he gets a license which permits him to treat asthma, by making pressure on the cervical vertebræ with his thumb nail or locomotor ataxia by twisting the end of his patient's coccyx. He relieves all cases speedily—of their money.

The law is good enough to cut off such impostors as those who manipulate the so-called Weltmer system, and the State Board cannot license them from the fact that having no qualifications whatever, it is impossible to classify their "department" of medicine or surgery. Weltmer should have donned a religious cloak.

The legislature quailed before the onslaught of christian science, and gave them free and unlimited license to commit the deadly sin of omission, only limiting them to ethereal methods. Well may legislators and jurors quail before anything religious, however, for they fear a repetition of "Christ before Pilate," yet the sin of omission practiced by the christian scientists is a thousand times more deadly than that of commission practiced by the osteopath.

One of the last states to fall into line in passing medical laws was Michigan, and yet one of the rudimentary suggestions of the Michigan State Board of Health was "That interests of life and health demand that children and persons too sick to be able to judge of the qualifications of those who are called to treat them, shall have protection against such quacks and charlatans"—meaning "christian scientists." If we cannot dispose of them altogether, something like this incorporated in our laws would do wonders for humanity. What we need is a *single high standard of scientific medical education for everybody*, and a Board of Health with the back-bone to see that every applicant's qualifications meet that standard. Illinois has become old enough to do away with child's play.

The men appointed to execute health laws should determine properly such schools to be recognized, and power should be given them to revoke the charter of such institutions as failed to fulfil the standard set. This would do away with the various diploma mills in Chicago and elsewhere, which are an insult to the profession.

The determination of standing of medical colleges should be left to none but medical men. The Supreme Court of Pennsylvania on being appealed to for decision as to the standing of a certain institution, replied: "We have no more right to decide on the degree of medical science in the applicant than on the piety of a congregation or any other religious sect which applies to us to certify to a proposed charter of incorporation; and this might place the degree of Doctor of Medicine in a situation somewhat similar to what was threatened by a celebrated minister of France, who said

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'He would create so many Dukes, that it would be a shame not to be a duke and no honor to be a duke.'" Our requirements should at least be as high as other less civilized countries. Even Spain requires a course of four years and a rigid examination; Portugal five years and reading publicly of a thesis; France four years; Germany four and one-half years and a good preliminary training; England five years; Turkey six years, and poor, ignorant Russia eight years, and besides that, every applicant for a medical degree must have obtained the degree A. B.

In dealing with the relation of our laws to the practice of medicine, we should consider, primarily, that "Every man may use his own property or knowledge to his own advantage so long as it does not injure another." Therein lies the fundamental principles of social government. Government is indeed a social compact. Society does away with the struggle which animates the breasts of animals. Society grants equal rights to all. I give up my liberty to murder you and you give up your liberty to murder me. Violation of my rights or your rights should constitute an offense against the law. Therefore, if the law allows me a license to follow a certain vocation or profession, and I use such a right to the injury or depletion of my fellow-men, that same law should take away the right from me. Before I go farther, I want to say the present Illinois law has many good points. It is defective through no fault of ours, but due to depraved opposition. I have respect for it and its advocates. In fact, faith in its efficiency and power to moderate present evils was so great that we took steps to see it enforced. When we began its enforcement in our quack-bedridden city of Peoria, it brought down a landslide of abuse and personal slander from a back-biting, quack-supported newspaper of Peoria.

These attacks teach a man where his friends are. Suffice it to say, however, that with the aid of a conscientious young attorney and the support of the city medical society, we have succeeded in ridding our city of all our quacks and irregulars, except those advertisers who hold diplomas and one osteopath, who in some way obtained a license from the State Board.

The whole earth fairly teems with the advertisements of these follows and their remedies. The bill-boards glow like Italian sunsets; whole editions of dailies, weeklies and monthlies are turned into bulletins for them. We have remedies from the animal, vegetable and mineral kingdom. From the far East and distant South, come remedies which in the hands of the charlatans cure disease in ten minutes by the watch. The watch stops usually before the ten minutes are up, however, but not before money has changed hands. Cures by magnetism, electricity, faith, christian science, mental culture, allopathy, homeopathy, hydropathy, boneopathy and mudopathy. Cures! cures! are everywhere, and yet disease and illness go stalking through the land. Dr. Ratte discovers a cure for consumption; gold-befogged and fool-begotten newspapers herald his self-imagined lies throughout the length and breadth of the land, and many poor sufferers draw near and deposit their hardened gold in his coffers, and retire poorer but rarely wiser men. Disappointment and ruin follow this awful fool-

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hardiness, and yet a people who brag of their practical good sense continue to tolerate it.

Aided from time to time by personal briefs prepared by the State's lawyer during the prosecution of the unlicensed in Peoria, I have gathered a few data and have recognized some deficiencies and other creditable points in medical law, as it at present relates to the practice of medicine and surgery.

That part of section 3, providing that none may call themselves doctors except those who have a full license, having fulfilled the highest requirement of the law, separates the black sheep from the white, as far as name separates them. It is good. The section as a whole is, however, a hoax, merely affording a loop-hole far the non-qualified to become legalized humbugs, under the name of osteopaths, etc.

Section 6 is first-rate, only the State Board has not, to my knowledge, tested its power, or if they have done so, probably suffered so much abuse from the newspapers that they found it more pleasant to desist. Many of the present-day newspaper advertisements clearly come within this section of the law. If this does not constitute unprofessional conduct and show false misrepresentation, then my interpretation of what constitutes unprofessional conduct is sadly at fault.

Section 7 reads in part, "This act shall not apply to any person who ministers to or treats the sick of suffering by mental or spiritual means, without the use of any drug or material remedy." Now this means that the minute the christian scientist places his hand on the patient in a mechanical way, or to assist nature in any way, he or she becomes amenable to the law. So far so good; but how about children of tender age and those persons too sick to be able to judge of the qualities of their treatment?

This clause, if admitted at all, should be amended to cover this vital point. Children should be of such an age and sufficient intelligence to decide for themselves whether they need hocus-pocus or medical attention. It is our duty to protect them. The other fanatics who desire to throw aside the first law of nature are to be pitied, but really do not deserve our attention.

Section 8 is good. It forces those humbugs who go about the country selling colored waters for medicinal purposes to pay dearly for their deception. It is an effectual damper in most cases. It should likewise require each patent medicine concern or advertising doctor to pay $100 per month for each agent sent out to solicit patronage.

The law should more definitely define what constitutes practicing under another physician. Men and women go about the country asking questions from a prepared formula, and report to a licensee in the city who sends them medicine to cover the case. This is dangerous to the public health, and should be stopped.

A point of constitutionality was raised against this section, declaring that the point covered was not incorporated in the "Title to the Act."

Article 4, paragraph 13, of Illinois constitution says, "No act shall embrace more than one subject, and that shall be expressed in the title."

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Mr. Justice Shope rendered a decision on this point, making it sufficient under the general head of medicine. It was also argued in this manner that as no instruments or medicines were used the "Title to the Act" did not cover the "Profession of Osteopathy." The judge held that the act was not restricted to any particular methods. The only way the osteopath gets around the act now is to appear before the board claiming to practice a particular system or branch of medicine. His branch soon becomes a tree after he has hoodwinked (?) the State Board. This part of the act was well intended no doubt, but as matters stand, after a license is once obtained, it is a hard matter to take it up again. A yearly renewal of license would be excellent. It would put all irregulars on the defensive and render the State Board independent of examination fees. It is just as reasonable for a man to make a specialty of treating nervous diseases with medicines without first having taken a regular course, as for the osteopath to treat all diseases by rubbing and twisting with no course at all, and yet the law would not allow the former.

Medical laws are generally constitutional. The legislature is not denied the power to make laws to regulate the practice of medicine. We read, "The police power is that power of the State which enables it to promote the health, comfort, etc., of society." It is broad and far-reaching. "In the profession of medicine, as in that of law, so great is the necessity for special qualifications, and so injurious are the consequences that are likely to result from want of it, that the power of the legislature to prescribe such reasonable conditions as are calculated to exclude from the profession those who are unfitted to discharge its duties cannot be doubted." The object of the law should be to protect the afflicted from the pretensions of the ignorant and avaricious, and its provisions should not be limited to those who follow beaten paths and established usuages, but all pretending should be qualified to deal with disease in all its forms, and any department which they might later elect would be intelligently filled. The provisions of the law should render it effective against pretensions, based upon ignorance on the one hand and credulity on the other. The powers of the board appointed to administer the law should bear a close analogy to school examiners, who have power to revoke licenses for any good cause. A good cause should consist in misstatements and false representation, such as are used by advertising quacks. From the truth we nor the public have anything to fear. There should be a particular statement somewhere as to what constitutes unprofessional conduct.

The duty of prosecution comes clearly under the jurisdiction of the State's attorney, but as they are notoriously delinquent in the discharge of their duty, and will prosecute no one until actually compelled by public clamor; it is a wise provision which provides for a special attorney being appointed. The State's attorney in Peoria endeavored to quash cases brought under the medical law, failing in this he went so far as to defend parties to the suit, but was defeated at every point. I reiterate that the proposed yearly renewal of licenses for a fee of 50 cents is excellent, and would supply the State Board with sufficient funds to carry their work to

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success and render them independent of the legislature. We will find it much more easy to get proper laws if we touch not the pockets of the legislators or their constituents.

In summing up, we find that the law should require:

1. A high standard for all. No exceptions.
2. A perfect definition of the "Practice of Medicine."
3. A perfect definition of unprofessional conduct.
4. A yearly renewal of license.
5. Appointees of the State Board free from political basis.
6. Definite provision for the appointment of attorneys to prosecute violators.
7. The recognition or exemption of no particular school or method, but efficient medical knowledge for all.

We, as honorable members of a noble profession, should see that the matter is presented to the legislature in its proper light.

The Etiology and Prevention of Uterine Diseases Before and During Puberty.—(Wylie, *Med. News*, February 3, 1900.)—Up to the age of nine or ten girls should be treated on the same general principles as boys. Chorea is common at this age, and can often be cured by circumcision of the adherent hood of the clitoris. Anything that affects the general health of the girl between the ages of ten and eighteen has a deleterious effect on the generative organs if continued for any length of time. The rapid growth of these organs require an active circulation, and if she has not sufficient vitality for this added burden harm is sure to result. Girls should be restrained in their studies and given more outdoor exercise at this period. Imperfectly developed generative organs readily become the seat of disease. Catarrhal troubles are apt to occur, and these with the advent of menstruation react on the general nervous system, impairing digestion and assimilation, this in turn aggravating the local condition. Such a girl suffers from anemia, from uterine polypi and hyperesthesia of the mucous membrane. Should she marry pregnancy is not likely to occur, but if it does a laceration with its usual train of evils is almost certain to result. In many of these cases the ovaries are also involved, being enlarged and containing cysts. This is merely a functional disturbance; there is no necessity of removing the ovaries, for under proper local and general treatment these cysts will cease forming and ovulation become normal. Impaction of feces and straining at stool is an important factor in the production of displacements. Corsets should not be worn during the developmental period. Rest during menstruation should be advised if it is indicated, but in a strong, healthy girl it is sufficlent to warn against excessive physical or mental exercise at this time.

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RHEUMATISM IN CHILDREN.

A SYMPOSIUM.

A series of articles from well-known writers, contributed expressly for the MEDICAL FORTNIGHTLY.

Management of Acute Rheumatism in Children.

BY LOUIS STARR, M. D.,
PHILADELPHIA

A CHILD affected with acute rheumatism should be put to bed in a properly heated and well ventilated and lighted room, and so kept at perfect rest until, not only the acute symptoms have subsided, but the pulse has become normal in character and frequency; in other words, until all danger of cardiac complication be surely passed. During the acute stage, marked by fever and painful swollen joints, the diet must be restricted to liquids; thus at 6 years, five fluid-ounces of milk guarded by one fluid-ounce of lime water, and four fluid-ounces of weak mutton or chicken broth may be given alternately every two hours, and cool (not cold) Poland or lithia water should be allowed in moderate quantities at frequent intervals. Regular evacuation of the bowels is important. If a laxative be necessary the salines are best suited; for example, one teaspoonful of Husband's magnesia in a fluid-ounce of lemonade given early in the morning. In the special treatment, liq. potassii citratis, in doses of one to two teaspoonfuls every two hours during both day and night, if the patient is wakeful, may be made the basis; to the first six daily doses of this, one, two or three grains of salophen or salicylate of sodium must be added, the dose depending upon the age of the child and severity of the symptoms. It is best to order the salophen or salicylate in powder form, and add to each dose of the citrate at the time of administration, as the total quantity can thus be more easily varied in accord with the daily requirements; salophen is more readily tolerated by the stomach; the salicylate is more active therapeutically. If the pulse be too frequent or feeble, tincture of digitalis should be employed, beginning with one drop every two hours, and if there be restlessness and sleeplessness from pain, deodorized tincture of opium may be very cautiously administered—two drops every two hours for three doses for a child six of years; both the digitalis and opium should be given with the basal citrate of potassium solution. Antipyrine, phenacetine, or allied preparations, should not be used in acute rheumatism either to reduce fever or relieve pain, as their cardiac-depressant action is dangerous. Warm camphorated oil or laudanum and olive oil (℥j-℥j) are useful local applications, and the affected joints should be swathed in cotton batting or enveloped in flannel bandages.

During convalescence, and for some time after, careful feeding is necessary; the following is an appropriate diet schedule: Breakfast 8 A. M. Milk 7 fluidounces, Vichy water (domestic), 1 fluidounce (one or two portions); one or two yolks of soft boiled eggs with salt, or a bit of fresh fish or sweetbread; bran or whole-wheat bread, dry. Dinner 1:30 P. M. A teacupful of clear meat broth; a bit of chicken, turkey, wild fowl or fish; one well-cooked green vegetable, i. e., spinach, young onions, cauliflower;

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dry bran or whole-wheat bread; junket or rice-and-milk pudding. Supper 6:30 P. M. Milk as at first meal; sweetbread or milk toast; dry bran or whole-wheat bread. For drink, Poland or Vichy water (domestic); use either freely. Avoid fats, starches, sweets and red meats, i. e., beef or mutton.

Tonics are essential aids in restoring strength. The best are tincture of nux vomica, drops 1 to 3 preceding, and Bashan's mixture, 1 to 2 teaspoonfuls following each meal.

Chorea Associated with Rheumatism.

FRANK PARSONS NORBURY, M. D.
JACKSONVILLE, ILL.

IN DISCUSSING the association of chorea with rheumatism recently with a professional friend of large clinical experience, he remarked that in his judgment, "Chorea is the result of emboli occurring in the smaller cerebral vessels, as pointed out by Kirkes, and really is only a symptom of a diffused pathologic condition." This opinion has been accepted by many clinicians, but the experience of all does not justify this sweeping hypothesis; on the contrary, the writer believes he has seen and now has under his care cases in which endocarditis is not present but the arthritic manifestations, together with the follicular tonsillitis which first characterized the history of the case, indicates a possible infectious origin and a very probable association with rheumatism.

Rheumatism has undoubtedly associations with chorea. Ashby and Wright say this association is not a mere coincidence; not only do we see children suffering from chorea attacked with rheumatism and *vice versa*. "But not infrequently we see a sister suffering from chorea and a brother with rheumatism, or attacks of chorea and rheumatism alternating in the same individual." Osler places this association as appearing in about 21 per cent of all cases, while Holt and Crandall found a history of articular rheumatism in 56.7 per cent. In the true Sydenham's chorea, there is always, or nearly so, a neuropathic family history, but there also is in the majority of cases at least, a history of rheumatism. It is not necessary that chorea immediately follow an attack of rheumatism; this is possible, but the interval may be, as shown by Sinkler, as long as six years. Gowers is inclined to favor fright as the cause of chorea, but he fails to say what is the family diathesis when such cases occur.

The writer may be wrong, but he believes that the arthritic neuropathic diathesis is the basis, even under such circumstances, for the existence of chorea. In a large clinical experience with children of this diathesis, he has found that this anemic, scrofulous poorly nourished class of children are more predisposed to chorea, than the simple neuropathic. There is something in the arthritic diathesis, as previously pointed out, and his later experience only confirms the former observations.

Sir Dyce Duckworth says the "blending of diathetic states is pregnant with interest," and we should know more concerning diathesis. "A full knowledge of them will not fail to bear much fruit in practice, and

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greatly to the interest of our daily work."—*International Clinic*, January. 1900.

My observation shows that the same diathesis predisposing to rheumatism, contributes toward chorea. This relationship between chorea and rheumatism is one showing unmistakable evidence of the existence of the same diathesis in both. The psychic element in chorea is similar to the psychic element of rheumatism frequently noticed in children, which change is functional; it improves with the improvement of the choreic state and recovery takes place with recovery from chorea. Cheadle (Albutt's Practice, Vol. IV) says, "The chain of evidence in favor of the rheumatic nature of chorea in the case of children is remarkable." . . "In the great majority of cases at all events chorea is of rheumatic origin." . . . "According to my observation, the rheumatic child in a family is the nervous child of the family."

From the observation then of others and the writer's own experience, it seems that this relationship between chorea and rheumatism is not merely casual, but has its foundation in the peculiar diathesis which predisposes to both diseases.

Rheumatism of Children; Symptomatology, Diagnosis and Treatment.

BY HENRY E. TULEY, M. D.,

LOUISVILLE, KY.,

Professor of Obstetrics, Medical Department, Kentucky University; Visiting Physician Masonic Widows' and Orphans' Home, etc.

IN THE scope of a short article on the treatment of rheumatism in children it would be impossible to properly consider the subject without a few remarks upon the varied symptomatology as presented clinically, in children as compared with adults.

In the first place, it is exceptional to see a typical synovial inflammatory condition in children due to rheumatism. Perhaps the only manifestation may be a severe, perhaps fatal, endocarditis. As a forerunner there may be an amygdalitis, vague pain, tortocollis, erythema, urticaria. Then, too, the intimate connection between chorea and rheumatism must be borne in mind, there being not the slightest doubt of their close relationship

The clinical picture presented, then, in a case of rheumatism in a child differs vastly from that offered in the adult. The therapeutical indications are not the same, the pain is not very intense, the joint inflammations are not great, active treatment is not, as a rule, as imperative.

The diagnosis is of prime importance. It once established, the treatment varies according to the clinical picture presented. The salicylates are of decided benefit, as a rule, well borne by children. The writer's preference is for the use of salol, given in large doses until the presence of carbolic acid is seen in the urine. Should endocarditis be present, evidenced by a low, whistling, systolic murmur, without other symptoms pointing to a rheumatism or other causes for this endocarditis being patent, we are fully justified in the early exhibition of the salicylates. Sedatives, local applications of cold to the precordial region, absolute rest and quiet. When coupled with chorea, removal of the child from family and friends under competent care of a trained nurse, would in brief be the outline of the writer's treatment of rheumatism in children.

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Common Sense in the Treatment of Typhoid Fever.

BY R. R. KIME, M. D.,

ATLANTA, GA.

President Tri-State Medical Society of Georgia, Alabama and Tennessee; Ex-President Atlanta Society of Medicine.

Read before the Tri-State Medical Society of Georgia, Alabama and Tennessee, at Chattanooga, October 24, 1899.

NO DISEASE is more universal and common. It is found in towns, cities and country; in mountains and valleys; in mansion and hamlet, where the cause exists there the disease prevails. It is no respecter of persons, but bids a graceful adieu when proper hygienic and sanitary regulations are established.

Osler says the number of cases of typhoid fever occurring in a city are an index to its sanitary condition. In every city the disease is lessened in proportion to the purity of the water and milk supply, and the efficiency of the sewerage system and drainage. Common sense and sound judgment, with a knowledge of hygiene and sanitary science, are essential in the prevention of typhoid fever, especially in cities.

In the treatment fads and fashions hold full sway, from the expectant do-nothing plan to the most active medication, limited only by the individual views of the attending physician and tolerance of the patient. Let us consider from a common sense view some of the methods and remedies advised for this disease.

Typhoid fever is recognized as a self-limited infectious disease, due to a specific germ and accompanied by certain pathological lesions involving the small intestine. The germ migrating to the mesenteric glands, spleen and other tissues of the body. The usual avenue of entrance is by way of the alimentary canal (in food or drink). Abortive cases occasionally occur with and without treatment. When once established it is a constitional disease, septic in character, and the treatment must be directed accordingly. By the time the disease can be diagnosed it is no longer a local intestinal leison, and cannot then be eliminated or aborted, no more than can a puerperal *septic* infection after it has passed beyond a local manifestation.

I do not believe we are prepared at present to deny that the antiseptic eliminative plan of treatment instituted early may act as a prophylactic measure, or at least modify the severity of the attack. A common-sense view would certainly make us feel that an alimentary canal filled with fermenting, decaying material, developing poisonous toxines, forming a hotbed for germ development in contact with diseased mucous surfaces, could but add to the infectious nature, increasing its virulence, weakening nature's powers of resistance, poisoning the general system, perverting nature's functions, all of which add to the gravity of the disease.

Clearing out and disinfecting the alimentary canal is indicated. To accomplish this calomel is essential, as it not only arouses the secretions, but favors the elimination of bile, especially when combined with podophyllin, both given in small doses, $\frac{1}{6}$ and $\frac{1}{3\frac{1}{2}}$ gr. respectively. Such doses can

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be repeated almost at will, during the course of the disease when needed. Bile is one of our best intestinal antiseptics, to which others may be added, according to individual preference. Salol and carbonate of guaiacol are usually most efficient. While I admit it is impossible to completely disinfect the alimentary canal, and such is not desired, yet we can approximately do so, at least to the extent desired. At no time in the course of the disease should the bowels become constipated. It is a snare and a delusion to hold the bowels in check for days at a time, except in cases of hemorrhage or perforation, and then only as a choice of the least of two evils. He who constipates the bowels is as dangerous as the one who moves them too freely by active cathartics.

When bowels do not move for several days, the retained material develops toxines, the hardened feces, especially if on milk diet, come in contact and irritate ulcerated spots and inflamed mucous membrane, we also have increased gaseous formation and distension of intestines, all of which add to the dangers of perforation and hemorrhage, beside the impairment of vitality due to absorbed toxines, disturbance of nervous system, digestion, etc.

Another element of danger is the straining at stool and the amount of medication and other means used to move the bowels when thus constipated, producing an over-effect favoring the very dangers we desire to avoid. There should be one or two evacuations daily, secured by the simplest means possible and best suited to the individual case.

Diet has much to do with the condition of the bowels. An exclusive milk diet for some would be injurious, as it frequently constipates the bowels, at times favors indigestion, fermentation and gaseous distention. In such cases the judicious use of milk, adding cream and lime water, as indicated, giving more soups, broths, fruit juices, etc., will aid digestion and act as a laxative. Lemonade with cream of tartar is efficient in many cases not given to close eating.

We all recognize the necessity of liquid, easily digested nourishing diet in these cases, such as will leave but little residue and contain no hard particles,

Feeding at regular intervals is a point many neglect; every four or five hours should be the rule, so that one meal may be digested and assimilated before more food is added requiring digestion. If more nourishment is needed give half-way between meals some of the food preparations that do not require digestion.

Tonics are best given at the meal time, while the disinfectants, tissue-builders and iron are given midway between, when indicated, at which time the prepared foods (panopetones, peptonoids, etc.) are given, thus securing regularity and system in medicine as well as food. Thus regulated nourishment is taken every two hours usually. Irregular feeding and dosage confuses the nurse, disturbes the patient, upsets the stomach, and worries the doctor. "All things should be done decent and in order."

The edict that typhoid fever needs no medicinal treatment has done much harm. While we recognize it as an infectious, self limited disease, and is said in some cases not to have special pathological intestinal lesion,

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yet we consider it septic in character with a prodromal stage with impaired digestion, disturbed nervous system and impaired vitality. The fever increases the oxidation in the tissues, nature's reserved force is called upon to supply the waste, toxines are elaborated in the intestinal canal accumulate in the blood and tissues, germs invade the intestinal glands, lymphates, spleen, etc., in most cases producing elevated spots or ulceration of intestines, to say nothing of the various complications and sequelæ that arise. Then are we to sit idly by with folded hands and let the combat of disease with nature proceed without assisting nature? I cannot conceive how a bitter tonic, chief of which is strychnia combined with digestants, or an acid so combined in small doses, given at regular intervals with the food, nor how some intestinal antiseptic alone, or combined with a tissue-builder, given between meals, can do harm. Neither can I conceive why calomel $\frac{1}{16}$ to $\frac{1}{10}$ gr. and podophylin $\frac{1}{32}$ to $\frac{1}{64}$ gr. given two or three times a day, or just sufficient to arouse the secretions producing a flow of bile, acting as a light laxative is not beneficial during the first week or ten days especially. I also go farther, and say it is indicated later in the disease, when tongue is coated a dirty brown or yellow, secretions checked and bowels inactive, if patient is not taking an acid. I have far greater fears of constipation than of two or three movements of the bowels daily produced by a laxative, but not by salts or some cathartic you cannot control in its effects.

To build a patient up by good food and tonics, keep bowels moving once a day and somewhat (not completely) disinfected fortifies nature against the disease, lessens its virulence, prevents complications and sequelæ. Such a course lessens the severity of ulceration in the intestines, reduces the chances of hemorrhage and perforations to a minimum. Upon this line of treatment I have never had a case of perforation that I recognized, and but one case of severe hemorrhage, and that in an old man I could not control nor keep in bed; his attack commenced first with a severe form of dysentery, later followed by typhoid fever with involvement of appendix.

As to aborting typhoid fever I am not prepared to say, for we have cases naturally abortive, other cases without intestinal ulceration, while in most cases the germ has passed beyond the intestine into the lymphatics, spleen, etc., before a positive diagnosis can be made. Neither the Widal test nor Diazo reaction come early early enough to confirm a diagnosis to test the Woodbridge treatment, as it must be commenced early to get good results claimed by its advocates.

Such treatment is not without benefit in some cases if given early in the disease, and not pushed to the point of weakening the vitality of patient. It cleans out the alimentary canal, partially disinfects the same, arouses the secretion of bile, and establishes a process of elimination, which may at least modify the severity of the attack. Such free movement of the bowels after the disease is once established cannot eliminate the cause nor effect, is fraught with danger, and good judgment would forbid its use.

Antipyretics as such are rarely indicated if the antiseptic eliminative treatment is judiciously applied early with proper restrictions as to diet. The use of antipyretics is simply combatting a symptom without removal of cause, and about as rational as antipyretics in other septic diseases.

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The use of the coal tar group as such is to be condemned, for they secure reduction of temperature at too great a sacrifice of vitality of patient. Reduction of temperature, when desired, can be secured by other means more rational and scientific.

Hydrotherapy in these cases is valuable, as it not only reduces the temperature, but has a salutary effect on the nervous system, and favors elimination, provided it is judiciously applied. The cold plunge bath and ice pack lowering the temperature several degrees so rapidly as to shock the nervous system and require stimulants to restore patient, is contrary to sound judgment and common sense.

In severe cases of typhoid the heart muscles are affected, some cases have kidney lesions, others severe intestinal ulcerations tending to perforation or hemorrhage and contra-indicate such harsh measures. The plunge bath in hospital use, properly graduated and applied to suitable cases, is the most popular treatment of today. In private practice and in the country there are obstacles which preclude its universal employment. In this class of practice the sponge bath is more satisfactory, and applied after the method of Dr. Hare it secures the benefits of hydrotherapy without the dangers and inconveniences of the plunge bath improperly applied. It can be applied at will without inconvenience or shock, tranquilizes patient, has salutary effect on nervous system, favors cutaneous and renal elimination without requiring to resort to stimulation to overcome shock and prostration, which so often follows plunge bath not judiciously applied. The use of stimulants in typhoid fever has been much abused, and often resorted to without just provocation.

Stimulants should be used as a medicine, and only when indicated, and not given as a routine or indiscriminately. I hope to see the day when the medical profession will wake up to its responsibility and duty as to the use of stimulants in disease, and not use them blindly or thoughtlessly, simply following custom. They have a recognized therapeutic effect, and should be prescribed for that effect only. The majority of cases of typhoid fever do not require stimulants. The use of strychnia combined with bitter tonics and digestants are of more benefit to the great majority of cases, both morally and physically. Yet we all recognize there are severe cases, with marked constitutional disturbance, impaired vitality and weakened heart's action, especially in elderly people, that require the judicious use of stimulants.

In all cases, especially severe attacks, no depleting, depressing remedies should be used, nature's forces should be conserved to the utmost, the vitality and general strength built up by the simplest means possible. Remove all obstructions to nature's physiological functions by the simplest, most efficient means at hand that will not depress nor add to existing complications. Improve digestion and assimilation, giving as much food at regular intervals as can be utilized without over-taxing digestion and adding material for development of toxic elements in alimentary canal.

The close observer has frequently seen a rise of pulse and temperature, with increase of coat on tongue, and constitutional symptoms aggravated by over-feeding and constipation of bowels. If a mild laxative is

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used with enemata, alimentary canal cleared of offending material, and proper regulation of diet instituted, the unfavorable symptoms soon subside and patient feels better.

Typhoid fever during pregnancy or parturition is an unfortunate occurrence, as it adds to the gravity of the case. Abortion, especially in severe attacks, frequently occur in these cases. "Kaminski, Zuler and Scanzoni observed in two-thirds of their cases the interruption of pregnancy. Giglio has demonstrated the infection of fœtus through the placenta."—Davis. "Charpentier collected 322 cases with 182 abortions or premature labors. Savidan has collected 31 cases with 5 deaths."—Parvin.

The writer had a case of labor at full term during first week of typhoid with evidence of septic infection a few days after delivery, in which the womb had to be kept tamponed with gauze for three weeks to prevent patient bleeding to death. The gauze had to be changed every twenty-four to forty-eight hours to relieve septic symptoms. Hemorrhage was so free the work had to be done rapidly, and then at one time the patient became pulseless from loss of blood, but finally recovered. Within the past six months I have had four or five cases complicating pregnancy, all of which have recovered, one now convalescing six weeks after labor In this case, some three weeks after labor, the discharges continuing after use of vaginal douches of two or three gallons of hot water containing boric acid and alum, I thought to facilitate matters by washing out the uterus. Free hemorrhage followed and gauze had to be used in the womb to check it, although uterus was small and well contracted.

With my experience I have the utmost regard for a puerperal typhoid uterus, and prefer to let it severely alone, although I am an ardent advocate for drainage in septic conditions. One of my cases had passed through a five weeks' course of typhoid fever, then followed by the vomiting of pregnancy—retaining nothing on the stomach for ten days, nourished by rectum. A few days after consultation uterus was emptied and tamponed. Patient gradually recovered without serious hemorrhage after operation, being in the second or third month of pregnancy. The dangers of hemorrhage and death in these cases are increased in proportion to the duration of pregnancy at the time typhoid fever occurs, the nearer full term the greater the danger.

Treatment of Gunshot Wounds of the Abdomen, with Some Statistics.—Grant from a study of 253 operated cases (*Virginia Med. Semi-Monthly*, January 12, 1900) concludes that symptoms are not always conclusive, that where the abdomen is perforated an immediate exploratory laparotomy is indicated, and if the ball is hard to trace the operation should receive the benefit of the doubt.

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Nutrition in the Management of Intestinal Diseases.

BY JOHN A. HALE, M. D.,
ALTO PASS, ILL.

NO GENERAL practitioner can fail to appreciate the importance of intestinal diseases arising from imperfect or faulty nutrition. It has been reliably computed that of all deaths among children under two years of age, 30 per cent have died from some disease due to this cause.

Unhygienic surroundings, such as bad air, impure water, and lack of personal cleanliness, certainly play no unimportant part in the causation of debilitating intestinal diseases. In cases of digestive derangement, not alone among children, but adults as well, the element of uncleanliness may, by perseverance, be eliminated, while the one central point of contention should be the physician's warfare against the ingestion of improper food by older persons, and the injudicious feeding of infants by those who have them in charge.

It is almost impossible to enforce strict dietary injunctions. Grown people as well as children overload their stomach, more especially in summer time, with fruits and vegetables which are either over-ripe or not ripe enough. Intestinal irritation is the result of such practice.

The first symptoms is a heavy, disagreeable feeling in the stomach, frequently followed in from twenty-four to forty-eight hours by vomiting. The disagreeable feeling increases in intensity to a distinctly painful griping sensation over the whole of the intestinal tract, with a sensation of fulness in the rectum, which is not relieved by free action from the use of salts or copious injections, and the passages thus secured invariably contain food which has passed through the entire digestive tract only partially digested, and sometimes wholly undigested. Hemorrhoidal complications arise, and especially in cases among children do we frequently find that troublesome complication, prolapsus recti.

In this condition the whole of the intestinal mucosa is a fertile field for the reception and propagation of pathogenic microbes. Following in their wake we find one, or more often, a combination of those debilitating intestinal diseases which soon become chronic, and last at least during the summer.

Usually but a small amount of fecal matter accompanies the discharges which are generally muco-purulent and sometimes bloody. In the cases among infants or small children the discharge takes on a greenish color, a fetid, sickening odor, and remain acid in reaction. In adults and children alike, the flesh becomes flabby, and the patient emaciated. If the stools are closely examined by the attending physician he makes a diagnosis of one of the many complaints, such as atonic gastritis, enteritis, choleraic diarrhea or entero-colitis.

Treatment, generally symptomatic, is instituted. The patient becomes better. Nutritives are administered, regardless of time, quantity or efficiency, more especially during the absence of the physician. Relapse

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is the result. The purposeless potentiality of this nutrition is apparent. Friends deplore the patient's condition. The physician again seeks to remove the morbific material thus collected, and its concomitant danger from auto-infection, and to stimulate the tissue-building forces.

Sorry to say, his selection of stimulants and nutriment are not always appropriately suited to the secretory functions of the digestive system while in this condition.

The requirements to be met in either one of the various alimentary troubles after they have progressed beyond the point of microbic infection are three in number:

1. The germs must be destroyed; treatment for which suggests itself.
2. The rapid waste of body material must be checked, which is self-evident and needs no elaboration.
3. The unassimilated food passing through the alimentary canal must be assimilated, in order to sustain and support the patient and replace the wasted body material.

The third and last requirement is the hardest to be met, for if the food given does not assimilate, the question arises, "what will fulfill the requirement in the form of a suitable food?"

And just here, as pertinent to the immediate subject, let it be remarked, that the ingestion of the remedy to meet this requirement demands the strictest attention of the prescriber in every detail.

Many nutritives have been placed before the profession, and milk in various forms has been advised. Unmodified milk is more often indigestible, and sometimes toxic in its action upon the digestive tract. The casein of cow's milk will form an insoluble mass when acted upon by the gastric juice, and although this coagulum may be partially overcome by dilution with water or special predigestion, the character of the caseinogen is not changed, and coagulation into a compact lump or lumps by the action of the gastric juice eliminates milk as the most suitable of dietary articles in these conditions.

A proper food should be concentrated, palatable, predigested, and contain a proper proportion of both animal and vegetable nourishment.

An experience with many cases and the trial of various predigested nutritives, has led the writer to rely upon only one of these prepared foods; although several have proven themselves beneficial in many cases, none have seemed to meet all of the requirements nearly so well as trophonine, which consists of beef, egg-albumin and the gluten of wheat. It has proven itself in all cases easily retained, easily assimilated and potent in nutritive value. One important feature in the administration of trophonine as a food, is that, while it may be given as a supplementary diet where small quantities of milk are digested, it may alone be relied upon to sustain and nourish the patient; and when so administered it is all absorbed and leaves no irritating residue as a foreign body in the already sorely distressed digestive canal.

Its ever increasing utility, both chemically and physically, and never-failing virtue in the restoration of the disordered digestive functions, commends it as a reliable, efficient remedy.

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The nutritive possibilities of trophonine, when given in teaspoonful doses at frequent intervals, are readily discernible in the rapid improvement of the patient, but more strikingly is its potency exhibited when administered by the rectum (one to two ounces, diluted with as much water), in those cases where the stomach will retain no nourishment. This amount by the rectum will sustain the patient and rest the stomach for from twenty-four to forty-eight hours, or until nourishment can be again properly administered and retained by the irritable stomach.

Apomorphine as a Hypnotic.

BY CHARLES J. DOUGLAS, M. D.,
BOSTON,
Physician in charge of the Walter Baker Sanitarium.

IN an article which appeared in the *New York Medical Journal* in its issue of October 28, 1889, I said:

"There is, however, one harmless remedy that will produce sleep in a few minutes, even when the patient is suffering with the wildest delirium. That remedy is apomorphine....The use of apomorphine in this manner (without producing emesis) and for this purpose is, I believe, original with me. While its value has remained so long unrecognized by the profession, yet in point of fact there is no hypnotic in our materia medica that is at once so prompt, so safe, and so sure." Since the publication of this article I have received many letters from distinguished physicians in various parts of the country expressing a special interest in this new use of apomorphine, and promising to try my plan for using it as a hypnotic.

The last edition of Potter's *Materia Medica* (1899) contains on page 394 this sentence: "Apomorphine, though a derivative of morphine, is neither hypnotic nor narcotic in any degree."

A statement like this in a recent work of such high authority and excellence shows how completely the profession has overlooked the most remarkable property of this drug. I am acquainted with no remedy that is so near an approach to an infallible hypnotic as this, and I have found it equally useful in all forms of insomnia, regardless of the cause.

Dose and Administration.—One-thirtieth of a grain, injected subcutaneously, is the average hypnotic dose of apomorphine, although individual suceptibility to this remedy varies sonewhat, as is the case with most drugs. This is about one-third the amount usually given as an emetic, and a still smaller dose, in many cases, acts as an efficient hypnotic. The object is to give a dose that, on the one hand, is large enough to produce sleep, and, on the other, is so small that nausea and vomiting are avoided. Such a dose is, of course, perfectly harmless in all cases in which a hypnotic of any kind is indicated.

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Under ordinary circumstances this remedy should be administered when the patient is in bed, or quite ready for bed. Should he receive the treatment first and attempt to undress afterward, he is liable to be overtaken by drowsiness, and in some cases nausea, which will make undressing disagreeable. In active delirium, when the patient objects to going to bed, no attention need be paid to this rule, as he will voluntarily lie down in a few minutes after the remedy has been injected. As occasionally a patient is found who is very susceptible to the emetic action of this drug, it is well to give at first the minimum dose, which is perhaps a fiftieth of a grain. In delirium, however, a little nausea will do no harm, and hence it is unnecessary in such cases to be so cautious about the dose.

Apomorphine acts as a hypnotic with the precision of clockwork. If the dose is properly adjusted the patient will fall into a sound and restful sleep in from five to twenty-five minutes, without nausea or other disagreeable sensations. If no results are obtained within half an hour after its administration, the dose was too small. It acts within that time if it acts at all. Vomiting indicates too large a dose. I have had two or three cases that required unusually large doses to produce sleep, and I further discovered that emesis could not be produced in those patients with any quantity, however large. Hypnotic doses slightly accelerated the heart's action in every case in which I have observed any change at all in the pulse.

The direct hypnotic action of apomorphine lasts apparently from one to two hours. But in many cases of insomnia the patient will sleep all night if he is only started right, and put promptly to sleep on going to bed. Such patients often require enormous quantities of the ordinary narcotic drugs to shut the world out from their consciousness and produce the first five minutes of sleep. Then they will sleep too heavily, and perhaps too long, awaking with the very disagreeable sensations that follow the excessive use of narcotics. Such sleep is but slightly preferable to insomnia.

But with apomorphine it is not so. It not only produces sleep more promptly and surely than any other safe remedy, but its sleep has all the appearance of a perfectly natural one, and in no case under my observation has it left on awaking any disagreeable results. Patients describe their sensations as like those following a normal and refreshing sleep. This remedy shuts off the "stream of consciousness" with valvelike precision, and this is once done the patient will usually continue to sleep without further assistance till the demands of tired Nature are satisfied. If, however, in an aggravated case, something more is needed to produce an eight-hour sleep, a very moderate dose of some slower-acting hypnotic, given at the same time as the apomorphine, will usually be sufficient to hold the patient in sleep after the effect of the latter remedy has passed away. Apomorphine has no cumulative effects, and consequently may be repeated at short intervals, if necessary, without fear of unpleasant results.

There is no possibility of a "drug habit" being formed, as it becomes a vigorous emetic if the dose is increased to only a tenth of a grain.

Both as a hypnotic and an emetic it is thoroughly neutralized if dissolved in a saturated solution of boric acid. Failing to find any refer-

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ence to this fact in medical literature, I conclude that it is unknown to the profession. Apomorphine does not long retain its strength in aqueous solution, and therefore should be freshly dissolved at the time it is used.

In hysteria it gives prompt relief, and the refreshing sleep thus induced may terminate the attack. In convulsions and as a general antispasmodic it ought to be equally useful.

Morphine patients, when suffering from the persistent insomnia that follows the withdrawal of that drug, are put to sleep with the same promptness and precision by the use of apomorphine. In fact, it is, in my experience, practically the only hypnotic that can always be relied on in such cases.

Narcotics and hypnotics are among the most important remedies known to medicine, and in calling the attention of the profession to these properties in apomorphine, I believe I have put into its hands perhaps the most valuable remedy of this valuable group.—*New York Medical Journal.*

THROUGH the courtesy of General Passenger Agent H. C. Townsend, of the Missouri Pacific and Iron Mountain railroads, we have lately received a book of photo-engravings of picturesque views along these two routes, through the Ozarks and in Missouri, Kansas and Arkansas. It is beautifully gotten up, and convinces us that a most delightful summer outing, with all manner of perfect scenery, is to be had within the limits of our State.

WESTERN OPHTHALMOLOGIC AND OTO-LARYNGOLOGIC ASSOCIATION. This Society held its fifth annual meeting at St. Louis on the 5th, 6th and 7th of April. The president, Dr. W. Scheppergrell, of New Orleans, opened the meeting with a paper on "The Rise of Specialism," in which he disproved the oft-repeated charge that specialisms in medicine are modern innovations. He cited historical data dating several centuries before Christ in which distinct references were made to specialists of the eyes, stomach and the head. The essayist commended specialists in medicine, as they promote more detailed study and thereby lead to higher medical attainments. A number of very interesting papers were presented by the various members, eliciting free discussion. Dr. Goldstein, as Chairman of the Local Committee of Arrangements, arranged for a museum of pathologic and anatomic specimens, which, while not large, was extremely interesting and marks a new departure in this society. The officers elected for the ensuing year were as follows: Dr. M. A. Goldstein of St. Louis, President; Dr. Wurdman of St. Paul, First Vice President; Dr. C. R. Holmes of Cincinnati, Second Vice President; Dr. Fayette C. Ewing, St. Louis, Third Vice President; Dr. W. L. Dayton, of Lincoln, Neb., Treasurer; Dr. Wm. L. Ballenger of Chicago, Secretary; Dr. C. R. Holmes was made Chairman of the Local Committee of Arrangements for the meeting to be held in Cincinnati next year; Dr. Loeb of St. Louis, Chairman of the Membership Committee.

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Reports on Progress.

COMPRISING THE REGULAR CONTRIBUTORS OF THE FORTNIGHTLY DEPARTMENT STAFF

GENERAL SURGERY.—C. E. Black, M. D., Jacksonville, Ill.

DISEASES OF THE CHEST—W. W. Bulette, M. D., Pueblo, Colo.

INTESTINAL AND RECTAL SURGERY—S. G. Gant, M. D., New York City.

DISEASES OF THE MIND—Frank C. Hoyt, M. D.

RHINOLOGY AND LARYNGOLOGY—John A. James James, M. D.

GENITO-URINARY SURGERY AND SYPHILOLOGY — Bransford Lewis, M. D.

OPHTHALMOLOGY—J. Ellis Jennings, M. D.

ORTHOPEDIC SURGERY — Phil. Hoffman, M. D.

GYNECOLOGY—Josephine Milligan, M. D., Jacksonville, Ill.

OBSTETRICS—R. B. Murphy, M. D.

MEDICINE — Frank Parsons Norbury, M. D.

CLIMATOLOGY—Hubert Work, M. D., Pueblo, Colo.

PATHOLOGY AND BACTERIOLOGY—Rutherford Gradwohl, M. D.

PARIS CORRESPONDENT — Thomas Linn, M. D., Paris, France.

NEW YORK CORRESPONDENT — E. Franklin Smith, M. D.

LONDON CORRESPONDENT — R. T. Hewlettt, M. D., M. R. C. P., Chief Bacteriological Laboratory, Jenner Institute of Preventive Medicine, London.

MEDICINE.

BY FRANK PARSONS NORBURY, M. D.

Formerly Resident Physician Pennsylvania Institution for Feeble-Minded Children; Formerly Assistant Physician Illinois Central Hospital for the Insane; Physician to Oak Lawn Sanitorium and Passavant Memorial Hospital; Neurologist to Our Savior's Hospital; Lecturer Psycho-Physics, Illinois College.

AND EGBERT W. FELL, B. S..

JACKSONVILLE, ILL.

Alveolar Catarrh in Children.—(Gittings and Judson, *Pediatrics*, January 15, 1900.)—Alveolar catarrh begins as a proliferation of the alveolar epithelium. If this is slight the products are expectorated, but if severe the alveolar are blocked, the walls are permanently damaged and cheesy degeneration may result. The fibrous layer is sometimes involved, resulting in hyperplasia and ultimately in fibrosis of the affected area. Five cases are reported, and the authors call attention to the following points: All were subacute, running a course of from six to eight weeks. The apices presented signs of alveolar catarrh long after the acute process in other parts of the lung had disappeared, and slight fever, anorexia and other constitutional symptoms persisted. The condition differed from tubercular infection in the absence of night-sweats, hemoptysis and marked wasting, and in their early recovery without hygienic or climatic treatment. Bacilli are constantly present in the lungs and pneumonic processes may be set up by irritation of the alveoli. The authors think that the symptoms in their cases differed sufficiently from bronchitis and broncho-pneumonia to justify their classification under a separate heading. Although examination of sputum was not made they think that the tubercle bacillus is not a necessary factor.

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Report of a Case of Septic Infection.—(Barnett, *Physician and Surgeon*, January, 1900.)—Onset of trouble was a child followed by severe rigor, hands and feet cold, lips and finger nails blue, respiration rapid and shallow, pulse quick and feeble, but no pain. Patient rallied on the application of stimulants, but next day these symptoms were repeated, temperature raising to 104°. In a few hours the temperature declined, followed by profuse sweating. This condition occurred at irregular intervals for the next two weeks, when numerous abscesses developed, the author calling attention to their symmetrical arrangement. Microscopic examination of the pus showed the presence of streptococci. There had been no history of infection, and the author regards it as a case of spontaneous pyemia, as described by Delafield in the International Encyclopedia of Surgery.

Dyspeptic Disorders of Infancy.—The approach of the summer season suggests the consideration of infantile dyspepsia. A disease not necessarily a summer disease, but yet one so common during this season that the laity call it "summer complaint." The cases which give the greatest anxiety are those originating from faulty feeding, of which the artificially fed are the universal victims. Infants nursed by the mother are seldom the subjects of dyspeptic disorders, while on the other hand the bottle-fed infant seems to suffer sooner or later from some form of dyspeptic disturbance. Especially during the season of elevated temperature, when conditions are favorable for the bacterial infection of milk, and which in turn taken as a food becomes an irritant to the intestinal tract causing catarrhal changes and making possible infection through this route. The process of infection is as follows: The germs introduced lead to excessive fermentation, and the bacteria, which are innocuous under ordinary conditions, become sources of intestinal irritation when they multiply in great numbers, leading finally to catarrhal involvement of the mucous lining of the intestine. The normal acid fermentation of the bowel is a prophylactic measure in health by affording protection against the pathogenic bacteria. This effect is lost, however, when intestinal catarrh is present, for the secretion is then alkaline, and affords a suitable medium for the growth and development of the bacteria of putrefaction. The albuminous matter of food is decomposed by these bacteria, setting free toxalbumins which enter the blood and become sources of danger by reason of their poisonous properties. Autointoxication is marked by subjective feelings of lassitude, headache, etc., while we objectively note, not infrequently, in infants, convulsions, stupor, and possibly coma and death. It is evident that success in the treatment of these cases is largely prophylactic, and that the hygiene and principles of infant feeding must be more widely understood to prevent these intestinal disorders. Of the first importance, simplicity should be the aim of all instruction, otherwise parents and nurses will forget the essential elements of success. Cleanliness is the one universal law that must be observed, and the bottle and utensils which in any way figure in the feeding of an infant must be absolutely clean. All left-over milk is to be thrown away and none but sterilized or Pasteurized milk is to be used. Great care must be used in the selection of milk, and it must be modified

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to suit the needs of the child. Promiscuous modification of milk without regard to the indications for the required amounts or proportions of the differents elements, is responsible for much of the dyspeptic disturbances of infancy. A proper consideration of the principles underlying the modification of milk in the home is important. In brief, to modify cow's milk, to make it approximate mother's milk, the fat, sugar and proteids must be maintained in the same proportion as in mother's milk. To do this, requires that the fat be maintained at its normal percentage, and that the sugar be increased and the proteids decreased. Again, these proportions may be varied according to the therapeutic indications, as for instance, in malnutrition the normal proportion of fat is too much for an enfeebled child, and must be reduced to suit its needs. To correctly estimate this proportion requires the scientific consideration of the child's condition, weight, etc., and this is not to done by any empirical method. Many physicians fail just here, in the treatment of these cases, simply because of their hit or miss, haphazard way of prescribing suitable diet. Infant feeding has become a science and must be followed accordingly if success is desired. The proper regulation of diet is the chief therapeutic indication in dyspeptic disorders of infancy. When dyspepsia has once set in and after dietetic regulation has not fully controlled the disorder, then calomel in one-tenth of a grain dose, repeated every half-hour until two grains or more have been taken, will cleanse the bowel, remove and prevent decomposition and allay the stomach irritation. In the course of a few hours all particles of undigested or fermented food will have been removed.

Rectal irrigation is useful to allay disturbance of the large bowel, but in mild dyspeptic disorders is not indicated. The main indication is to correct the digestive disturbance. Remembering that errors of diet may speedily cause a recurrence of the disorder; hence, the diet must be carefully supervised, and the power of digestion toned up by suitable medicaments, of which mineral acids, with essence of pepsine, or what is better, elixir maltopepsine (Tilden's), which contains the mineral acid and pepsine in suitable proportions, and is a most useful agent in such cases. It imparts tone to the digestive powers, allays gastric irritation and intestinal disturbance. Plenty of fresh air, wholesome water, frequent bathing and other such hygienic measures must be considered as contributing factors toward success in all cases.

This then is a simple variety of dyspeptic disorder and is the result, in the majority of cases, of irritation of the mucous membrane of the stomach and intestine by unsuitable diet (undigested or fermenting). The severity of the disorder varies with the extent of this process and the proportionate involvement or extent of local inflammation. A simple dyspepsia may become a very serious disorder when the toxemia is extensive, in which case there undoubtedly is a specific microbe responsible for the disorder. The distinction between simple indigestion or dyspepsia and acute infective gastro-intestinal catarrh is not difficult to make; the differential diagnosis being made largely upon manner of onset, extent and character of the temperature record of the patient, climatic conditions and simultaneous occurrence of other cases.

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MEDICAL LITERATURE OF THE DAY.

Abstracts of Interesting and Instructive Contributions Skimmed from Our Exchanges.

Report of an Epidemic of Typhoid Fever.—Hubbard, in the *Medical News* of December 30, 1899, reports an epidemic of typhoid fever occurring in a village of 350 inhabitants, of whom 63 were affected. Thirty-two cases occurred in families using water from a well, near which the undisfected discharges of a patient had been thrown the year previous. The remainder of the cases, with the exception of five, resulted from the use of water from eight other wells in the same neighborhood. The water was low at the time of the epidemic.

Gunshot Wounds of the Abdomen.—(Murfree, *Med. Age*, February 10, 1900.)—Non-penetrating gunshot wounds of the abdomen require the same treatment as wounds in the other soft tissues. Penetrating wounds not injuring the viscera are serious, but not as necessarily fatal as when the intestine is perforated. The extent of the injury cannot always be determined by the symptoms present, and if there is any doubt on this point the abdomen should be at once opened. In perforating wounds great shock, hemorrhage, vomiting, pain in the umbilical region and depressed cardiac action are usually present. A ball passing through the abdomen from side to side or obliquely is very likely to injure the gut, sometimes in as many as fourteen places. Delay jeopardizes the life of the patient, and the abdomen should be at once opened and the injury repaired. Under this treatment the mortality is high, but is much less than without operative interference. The patient should be kept quiet and should receive no food for forty-eight hours after the operation.

Prophylaxis in Gynecology.— Coe in the *Medical Age*, February 3, 1900, says, that if more attention was paid to prevention, surgical interference would not be so often necessary. An accurate knowledge of the anatomy and physiology of the pelvic organs and of the causes of their diseases will enable the physician to prepare young girls for their duties and responsibilities. The obstetrician can often prevent future trouble by immediate attention to the complications and accidents of pregnancy. Careful attention should be given to the climacteric, a condition bordering so closely on the pathological that beginning malignant degeneration is often overlooked. Early recognition of this and immediate operation may prevent the development of incurable carcinoma. Although prevention by legislation of the marriage of syphilitic or gonorrheal persons is greatly to be desired, the author does not think that it can be accomplished at present. Specific infection, whether gonorrheal or septic, should be recognized and treated by currettement before it has extended beyond the uterus.

Importance of Accurate Primary and Consecutive Examinations after Fracture.—(Thomas H. Manley, M. D., New York, in *Medical Progress*).—For many reasons it is highly important that one make as complete an examination as possible at the first examination, of the patient's general condition as well as the local state of the parts. This is particularly incumbent on the practitioner who is first called in to see the case; for in a

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considerable number of bad smashes after the examination and a temporary adjustment of the limb, the case forthwith passes out of his hands into a hospital or under the care of a surgeon. Even should the case continue under his own care, by this primary examination he is enabled to determine the extent of damage done, and provide such materials as frequent manipulation and dressings will require, and be able to properly foreshadow the future outlook of the case. It is true that in many cases a thorough examination immediately after injury may be quite impossible. The injury may have been sustained in severe, frosty weather, when the mangled parts must be promptly covered up and protected. There may be no facilities for properly dressing the parts, nor attendant to assist; and often, which is worse, our patient may be in such shock or collapse as will not permit of any protracted examination. Very much depends on this examination, and the measures temporarily employed, and hence, though the difficulties in the way are frequently very great, one must avail himself of the opportunity at the time, to grasp the true character of the injury, and accordingly prepare himself to deal with such a condition as a proper inspection will often forecast. Under favorable circumstances, in a considerable number of cases, but one examination is at all necessary, as when no extensive complications are present, when ample assistance, with instruments and dressings, adjustment, etc., are convenient, to commence and end one examination, in the first instance. This is the ideal and happily, in our time, is commonly practicable. In very serious cases of crushes of an extremity symptoms are present, or other circumstances exist, which impose a consecutive examination; and in this connection one of the first questions which is raised is, at what time, how soon after the injury, should a critical inspection of the parts be made, permanent therapeutic measures adopted and a definite adjustment applied? In my own practice there are two things on which chief reliance is placed, as a guide which seldom deceives. These are the patient's condition and the local state of the parts. If there are no serious constitutional symptoms; if the pulse is not accelerated, and the temperature above such limits as always attend febrile reaction, and if the injured part is devoid of severe pain, swelling, or signs of decomposition, one may proceed with leisure, and wait for twenty-four, forty-eight hours, or more, before disturbing the dressings and reopening the wound. After twenty-four hours, and sometimes sooner, reaction has set in, the numbness over the injured part, is now replaced by hyperaesthesia, and any motion of the limb is attended with much suffering. The parts are inflamed. At this stage a consecutive examination is accompanied by such operative interference as a given case will require therefore why some description of an anesthetic must be employed. At this time our examination must be critical and precise, for without this, our relief measures will be misdirected; our patient's recovery will be retarded, and possibly his life may be further imperiled by another operation, made necessary by some oversight, in this examination. For obvious reasons in this as well as the preceding manipulation of the limb, full notes should be taken of all the details. As operative measures should be always conjoined with this inspection, it will be further considered, later on.

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Pepto-Mangan ("Gude") in the Post-Operative Treatment of Gynecological Cases.—Dr. Elizabeth A. Riley, Boston, in *Annals of Gynecology and Pediatrics:*

Case I.—Mrs. E. L., aged 24, admitted March 6. Diagnosis: retroversion and endometritis. History of pain in left side and lower back whenever she works, since the birth of child five years ago. Catamenia very profuse. Operation March 10. Cervix was mechanically dilated and the endometrium steamed for 30 seconds. She did not wish further operative treatment and was discharged improved March 21. Readmitted April 20. Operation April 26. Tubes and ovaries were found normal. Ventro-suspension was performed. At the time of the operation the heart was rapid and irregular. The administration of Pepto-Mangan was begun on the 27th in dose of a teaspoonful. This was increased to two teaspoonfuls the second day and a tablespoonful the third day, given three times a day after meals. Convalescence was rapid. Heart action quickly steadied. Discharged May 17, well.

Case II.—Mrs. K. D., age 28, admitted April 8. Diagnosis: bleeding hemorrhoids and some obscure abdominal condition. History of severe pain in right side and lower back. Profuse leucorrhoea. Anaemia was very marked. Second sound of heart was much accentuated. Operation April 12. Cervix was mechanically dilated and endometrium curetted. The abdomen was opened in the median line and varicose veins found in the right broad ligament. These were tied off. Pelvic organs were otherwise normal. The hemorrhoids were treated by clamp and cautery. Pepto-Mangan was started the second day, as in Case I, and increased in the same way. Convalescence was uneventful. Patient's color returned. Discharged May 11, in good condition.

Case III.—Miss M. M., age 26, admitted April 25. Diagnosis: retroversion and tubo-ovarian abscess. History of profuse metrorrhagia. Has flowed most of the time since March 1. Patient very weak and anaemic. Appetite poor. Constituated. Mucous membranes all pale. Operation April 28. Cervix was first dilated mechanicallly and the endometrium curetted. Large amounts of tissue were removed. On opening the abdomen both Fallopian tubes were found to be filled with pus and the uterus soft and friable. Ovaries, tubes and the body of the uterus were accordingly removed. As might be expected, the patient was greatly exhausted. Pepto-Mangan was begun in half teaspoonful doses after each meal. Convalescence was so rapid that on May 24 she was discharged well.

Case IV.—Miss C. B. C., age 35, admitted May 1. Diagnosis: ovaritis. History of burning in abdomen and down legs for last two years. Considerable leucorrhoea. Extremely nervous. Appetite poor. Constipated. Sleeps badly. Operation May 3. Left ovary was found prolapsed, enlarged and adherent, and was therefore removed. Pepto-Mangan was given on May 4, in half teaspoonful

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doses, increasing the succeeding days. Nervousness soon lessened, appetite returned, and convalescence progressed. A stitch abscess retarded matters somewhat, but in spite of that she was discharged July 16, in greatly improved condition. The nervous disturbance was practically gone.

Case V.—Mrs. M. E. McK., age 27, admitted May 1. Diagnosis: lacerated cervix, endometritis. History of headache and backache, with bearing-down pains and leucorrhoea, since the birth of her child eight years ago. Eats and sleeps poorly. Bowels are, however, regular. Heart action weak and irrgular. Operation May 3. Cervical canal was dilated and the endometrium steamed for forty seconds. Cervix was then repaired. Pepto-Mangan was begun at teaspoonful doses. It was well borne, was rapidly increased, and improvement was marked. Patient was discharged May 17, in good condition.

Case VI.—Miss M. F. C., age 23, admitted May 3. Diagnosis: dysmenorrhoea. History of extreme pain with catamenia, since menstrual life began (at 13), in the centre of the abdomen and also in back and head. Patient's general condition seemed good. Operation May 5. Tubes and ovaries were removed and the uterus fixed to the abdominal wall. Pepto-Mangan was given as soon as practicable. Patient grew better rapidly and was discharged well May 29.

The above cases, even thus imperfectly reported, seem to indicate that in this preparation we have a very valuable assistant in the convalescence of operative cases. Especially is this true in those cases which have lost a large amount of blood or which have become nervously exhausted by constant fret of pelvic disease. Capital cases, too, find in this a most excellent tonic, easily borne and assimilated at a time when any medicine, however, efficient, must not cause abdominal or gastric irritation.

McArthur's Syrup Hypophosphites Compound. — After an attack of the grip the patient finds himself in a state of extreme weakness and prostration from which condition he is tediously brought to his former good health. Remedies which stimulate his exhausted nerves too vigorously do so at the expense of his general condition. Then comes the relapse. Syr Hypophos. Comp. [McArthur] conveys to the tissues the revivifying and vitalizing agent phosphorous in its most oxidizable and assimilable form. Thus the true vitality of the nerve structure is restored by renewing the nutrition of the tissues themselves.

The annual meeting of the Missouri State Medical Society will be held at Mexico, May 15 to 17. A large attendance is anticipated, and for this reason delegates should lose no time in making their hotel reservations. The Windsor Hotel, which will be headquarters for the occasion, is one of the best in the West, and rates of $2.00 per day will be made. Write at once and secure your rooms. Free baths are a feature of this popular house.

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The Medical Fortnightly.

Issued Tenth and Twenty-fifth of Every Month by the Fortnightly Press Co.

UNDER THE EDITORIAL DIRECTION OF

FRANK PARSONS NORBURY, M. D. AND THOS. A. HOPKINS, M. D.

Secretary: CHARLES WOOD FASSETT, M. D.

A COSMOPOLITAN BIWEEKLY FOR THE GENERAL PRACTITIONER

Editorial Offices in St. Louis, Chicago, Cincinnati, Jacksonville, St. Joseph, Kansas City, and Pueblo, where specimen copies may be obtained and subscriptions will be taken.

Address all business communications to the Fortnightly Press Company.

Address all contributions and books for review to the Editors, Suite 312, Century Building, Saint Louis.

Paris: U. S. Press Building, Espanade des Invalides, Paris Exposition.

Volume XVII **MAY TENTH** **Number 9**

Editorial Department.

Disharmony.

DISHARMONY is a lesion of organization; a degeneracy of evolution. In mental medicine the disharmonies form the transition between the normal and pathological conditions. In it is the middle ground where equilibrium is easily disturbed. The vice of medical organization is disharmony, a lack of poise and fancies and inclinations of the profession. The medical profession as a profession is constitutionally a discordant whole. It has never been in tune, because a proper key or pitch has never been given. As a profession it is a complex, heterogeneous whole, made up of disproportioned elements, contradictory tendencies and every defective timber.

The profession is possessed of an intellectuality that is of the highest order, its mental faculties reach higher, deeper, broader than that of any profession, but it lacks in cohesive qualities. Its peculiarly brilliant mental endowments rather over-balances its practical considerations. Its individual members being human are given to singlarities of make-up. They become successful practitioners—they owe their success to purely the original powers and limitations given them at birth. Their success is a personal success, naturally they become believers in self, ultimately, not being buffeted in life's course by the friendly but polishing processes which characterize a lawyer's life, the physician finally is apt to blossom into an egotist. As such he may become a good or bad physician, just in proportion to his isolated anomalies of conduct and character.

If he is altruistic he will naturally lean toward serving others, and no doubt become an honored citizen, a successful practitioner; but if he is an egotist he will be overmastered by his egotism and his intellectual direction while being toward scientific attainments, may yet be so decidedly impervious and eccentric as to exclude the practical and useful, and make him ridiculous in his conduct, and even in his investigations. Such an individual is either a crank or a pure theorist and dreamer, whose practical work amounts to nothing.

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By reason of the isolated life of the physician it is possible for such men to live and practice in a community and only be regarded as cranks. From such a class of introspectionists and egotists are recruited the individuals who create and maintain disharmony in the profession. These introspective individuals are the men who are sensitive to criticism, quick to believe an injustice has been done them, and pose as the victims of professional jealousies. A grievance, ever so small, grows; the proverbial mole hill becomes a pathological mountain of spite and ill-will.

In every community it is possible that more or less of this abnormal condition exists between men; such disharmony is really pathological, for rivalry, competition should not engender such freaks of conduct. The impervious, haughty and exacting physician is a mental freak; he cannot command the confidence of his fellows, and because he cannot rule in a medical society he trys to ruin, and exasperated by his poor success, beset by jealousies and tormented by being ignored, he becomes a curbstone falsifier, and belittles to every one who will listen, medical organizations and medical men who believe in organizations. Oftentimes such a man passes from comments to complaints, complaints to threats, and from threats to crime, and the community hears "about another doctor's quarrel ends in a crime."

It is too bad that men trained to be considerate of the frailties of humanity must expose their own psychic disorganization; their lack of proportion, and expose their wrongs, imagined or real, to the public gaze. Such men are by temperament and instinctive tendency degenerates, and belong to the class of mental defectives which the French call phrenasthenics. They cannot control themselves, they are out of harmony, and naturally cannot, nor will not, tolerate criticism, suggestion or interference. They have profound convictions, exalted opinions of self, and sometimes delusive suspicions which makes fanatics of them. We need a reform in medical training, students need some instructions in moral science, the data of ethics and pure psychology. Lawyers imbibe this in their training; ministers have it as a part of their profession, but the physician knows little of the principles of psychology underlying his own association with his fellows and his towns-people.

The modern tendency is to take the physician off of his pedestal of egotism, take off his silk hat and long beard, put him in tan shoes and a sack coat, give him the appearance of other men and make him do as other men, and learn by hard knocks that he is simply clay; sometimes poor dirt at that, and if he wants to be of use he must mix with his fellows, tolerate a broad altruism and be a civilized man. F. P. N.

THE local commencement season closed with the graduation exercises of the Marion-Sims College and the medical department of Washington University, which occurred during the last week of April. Both schools ended a year of uninterrupted prosperity.

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DR. HAROLD N. MOYER,

CHICAGO,

President Illinois State Medical Association.

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The Illinois State Medical Society.

THIS year makes the semi-centennial anniversary of the organization of the Illinois State Medical Society. The first meeting was held in Springfield in 1850, and it is appropriate that in 1900 the society convene in the city which gave it birth. The first President was Dr. Rudolph Rouse, and the first Secretary, Dr. Edwin G. Meek. Meetings have been held annually except 1861–1862, when "on account of the large number of members engaged in the volunteer army of the United States," it was thought advisable not to hold meetings.

This society has been an active one, and in recent years decidedly progressive in all that pertains to higher medical thought and action. It has been among the foremost of State organizations in medical legislation and in advocating reform in educational, hygienic and medical practice regulations.

The Springfield meeting, to be held May 15th, 16th and 17th, promises to be in point of scientific interest of high standard. The preliminary program appears elsewhere in this issue. The annual banquet will be held at the Leland Hotel on Wednesday evening, May 16th, and the toasts on this occasion will pertain to the history of the organization, its present attainments and future possibilities.

The Illinois State Medical Society now has a membership of about seven hundred; it owns and publishes its own medical journal, *The Illinois State Medical Journal*, and its future is promising for continued usefulness and power. The officers for the year are:

President.—Dr. Harold N. Moyer, Chicage.
First Vice-President.—Dr. J. T. McAnally, Carbondale.
Second Vice-President.—Dr. Weller Van Hook, Chicago.
Permanent Secretary.—Dr. Edmund W. Weis, Ottawa.
Assistant Secretary.—Dr. B. B. Griffith, Springfield.
Treasurer.—Dr. George N. Kreider, Springfield.

Who Killed Cock Robin?

A CERTAIN amount of egotism is perhaps necessary in some people, in order to breed sufficient self-assurance to make success in life for them possible. A pardonable amount, we will grant, is a necessity, but beyond this it becomes a burden to its possessor and to his friends, if he has any. The "who killed cock robin, tooter of his own horn," is somewhat like sand-burrs to the barefoot boy, rather persistently annoying. A physician of this temperament possessed of these attributes, like cod-fish balls three times a day, becomes somewhat wearing, even to a Cape Cod deacon. The big I, like the cartoonist's conception of Mark Hanna, soon overtops the real thing, and leaves a great idea and a great man smothered with personal egotism. The lower case i even is out of place, and it and the big "I" are the source of much laughter and rude burlesque. Now, is the season when the man with original ideas prepares

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a paper for the State or National medical society, and tells all about how cock robin was killed, even to the time of his death, the post-mortem findings, and why the clock stopped at 3.47. Statistics will be studied to show figures can lie (as well as their manipulators), and the pure, unadulterated reasoning, as shown in the conclusion of the papers, will serve to show how hell happens to be paved with good intentions. The essence of conceit as expressed in numerous "I's" will also show, that while nature strives to cover up her defects, yet occasionally she misses it, and fate is required to restore the equilibrium that nature and man may still let the universal law of heredity work on, and the fittest survive. Do not worry over the man who reports his 1752 operations without a death, for melancholy has marked him for her own, and the medical world knows it.

F. P. N.

DRS. J. N. ENGLISH, of Litchfield, Ill., and R. L. Green, of Peoria, have been among the recent callers at the FORTNIGHTLY office.

OUR esteemed friend and contributor, Dr. J. H. Miller, of Pana, Ill., is doing post-graduate work at Johns Hopkins Hospital, Baltimore.

THE Association of Medical Officers of American Institutions for Idiotic and Feeble-Minded Persons will hold its twenty-fourth session at Polk, Pa., May 29th, 30th and 31st.

THE ST. LOUIS MEDICAL LIBRARY ASSOCIATION held its annual meeting April 27th, closing the first year of its existence. During this year the membership has increased satisfactorily. The library contains about 3000 bound volumes and 167 of the best medical journals published in this country and Europe on file. The reports of the officers, which were read showed an encouraging state of affairs in the finances of the organization. The officers chosen were: President, Dr. N. Bruce Carson; Vice-President, Dr. J. H. Duncan; Secretary, Dr. Frank L. Henderson; Treasurer, Dr. Hanau W. Loeb; Librarian, Dr. Frank J. Lutz; Board of Trustees, Dr. Joseph Grindon and Dr. Robert Funkhouser.

THE MISSOURI STATE MEDICAL SOCIETY.—In point of attendance the meeting of our State Society at Mexico promises to be a record-breaker; St. Louis will send a larger delegation, and is displaying interest quite in excess of that of previous years. It is planned that the delegation from the St. Louis Medical Society shall go in a body, leaving on the evening of the 14th on the Wabash, and it is further planned that all, in so far as it is possible, shall stop at the Windsor Hotel. Other cities are displaying interest quite as encouraging, and it seems we will test Mexico's claim that she has abundant hotel accommodation. It is hoped that all members of the St. Louis Medical Society who plan to attend this meeting will arrange to leave with the delegation on Monday evening. Hotel reservations should be made in advance at the "Windsor."

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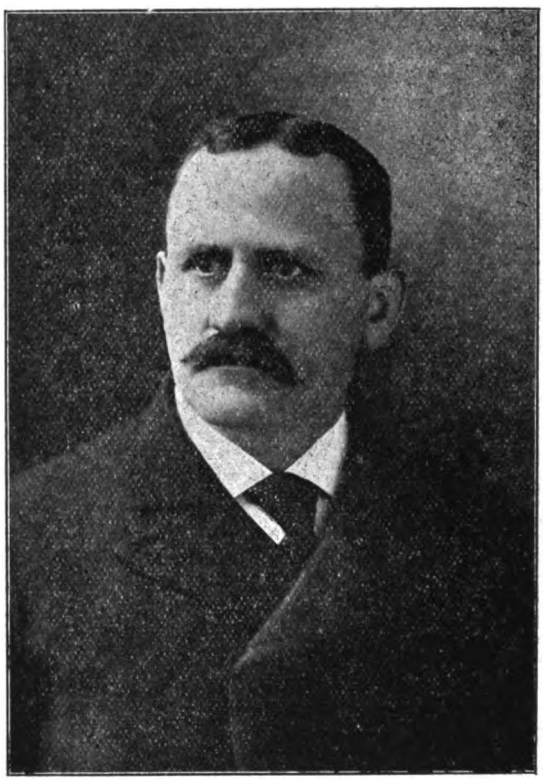

DR. W. B. DORSETT,

ST. LOUIS,

President Missouri State Medical Association.

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PHILADELPHIA LETTER.

[SPECIAL CORRESPONDENCE.]

Improved Milk Supply—New Plans of the Philadelphia Pathologic Society—The Passing of the Doctor's Horse.

April 20, 1900.

The questions relating to a pure milk supply were well brought out at the last meeting of the Philadelphia Veterinary Medical Society. Dr. Robert Meade Smith, in his paper on the Pasteurization of milk, claimed that ordinary commercial milk carries about 200 varieties of bacteria, most of which are benign, and some of which seem to be more or less essential to digestion. It was further shown by Dr. Pearson that by practical bacteriology of the kind that could be observed on any farm, the number of bacteria to the cubic centimeter of milk could be kept within the 10,000 limit. This is the limit fixed by the Philadelphia Pediatric Society as providing a milk that is safe for infants and the sick-room. Inasmuch as the number of bacteria in much of the milk that is sold by some of our best dairies sometimes run as high as 800,000 to the c.c., the above statement by one of the best veterinarians in the State is of the utmost significance, and should call forth proper preventive legislation. Dr. Frederick Packard, in behalf of the Pediatric Society, stated that certified milk (that is to say, running under the 10,000 to the c.c. limit), could now be readily obtained, and urged the society to make known the fact to the profession at large. He intimated that cholera infantum was being accepted by some authors as infallible evidence of excessive bacterial pollution of milk. Two of the largest milk companies supplying Philadelphia have permanently retained an expert veterinarian to look after their herds and farms, and a trained bacteriologist to daily estimate the bacterial strength of the milk. One of these dairies publishes a daily report of the bacterial equivalent of each c.c. of their milk. All of the product running over 10,000 bacteria per c.c. is labelled and sold as milk for cooking purposes. The rest is sold at a slight advance over the regular price, and is certified to as safe for infants, the sick-room, and all other purposes requiring raw milk.

The Pathologic Society of Philadelphia has widened its field of usefulness by recently admitting to associate membership, all prominent biologists, among whom is Dr. Conkling, who holds the chair of Biology at the University of Pennsylvania. The society hopes that by enlisting the sympathies of these workers they may be enabled to approach many moot points in pathology, in a much broader spirit. It is hardly to be doubted, that by fuller treatment accorded by comparative pathology, many such points could be brought much nearer to solution.

Philadelphia, with its 250 miles of fine asphalt street, promises, to be no less a paradise to the automobilist than to the wheelman. There is much stir among the doctors anent the possibilities of the automobile. Two West Philadelphia medicos have evolved from the experimental stage as far as their own practices are concerned, and may be seen any day and in all weathers spinning around corners in a fashion that strikes envy into the

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hearts of their less courageous or less well-to-do brethren. One of them has been using a Winton wagon for the last year, putting it to hard use every day, and claims that not only is his expense less, but he finds his working efficiency almost doubled. Not a small number of our physicians are using them now, some for pleasure, the rest with a view to finding out just how far the machine may be used to suppiant the horse-drawn vehicle. It is surprising how these steam and gasoline wagons can be operated over streets covered with from two to three inches of snow. Rain doesn't seem to interfere with them in the least. Verily, we are about to witness the passing of the doctor's horse—that faithful servant on countless errands of mercy, these many, many years. WENDELL REBER.

AMONG THE MAGAZINES.

In the *Review of Reviews* for May, there is editorial comment on Admiral Dewey's candidacy; on the government of Puerto Rico under the law recently passed by Congress; on the proposed government of Alaska, and on the developments of the month in financial and industrial circles. Other topics treated in "The Progress of the World" are the rush to Cape Nome, fox breeding in Alaska, the April elections, the epidemic of strikes, the opening of the Paris fair, the military operations in South Africa, and the Delagoa Bay Award, The methods of fighting the bubonic plague in Honolula are described in the same number by Mr. Reuben D. Silliman, who gives a graphic account of the great fire of January 20. The article is illustrated from photographs of the fire and of the temporary hospitals equipped for the emergency.

THE CENTURY.—Among the timelier articles in *The Century* for May is an essay by Andrew Carnegie entitled "Popular Illusions About Trusts." The writer contends that the popular welfare is increased by trusts; also, that such aggregations of productive capital are usually short lived. "The only people who have reason to fear trusts," he says, "are those who trust them." An editorial in the same number entitled "The Real Danger of Trusts," while agreeing with Mr. Carnegie as to the material advantages of such combinations, sets forth wherein they are a menace to the independence of the individual and state. "Significant ignorance of the bible" records entertainingly the results of certain attempts by the author, President Thwing of Western Reserve University, to determine to what extent the Bible has ceased to be a book familiar to the average collegian of either sex. His conclusions are not reassuring to those who regard the Bible as the book of books. Under the modest title, "Leaves from a Notebook," Thomas Bailey Aldrich offers a few pages that show him as poet and proser—or rather as poet and wit. Adventure is the motive in the concluding chapter of Benjamin Wood's "Hardships of a Reptiler" and something more than mere travel sketches are to be found in "Our Friend the Sultan of Jalo," by Charles B. Hagadorn. "The Maharaja's Water Carnival," by the artist-author, R. D. Mackenzie. The two leading serials—Mr. Morley's "Oliver Cromwell" and Dr. Mitchell's "Dr. North and his Friends"—maintain their interest. This number of *The Century* appeals to lovers of art by its frontispiece portrait of Wordsworth at seventy-seven and its reproduction of Rembrant's "Rabbi with the White Turban."

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Original Department.

PAPERS for the Original department should be in hand one month in advance, and contributed to THE MEDICAL FORTNIGHTLY exclusively. A liberal number of extra copies will be furnished authors, and reprints may be obtained at reasonable rates, if request accompanies the manuscript. Engravings from photographs furnished free.

Contributions, and books for review, should be sent to the Editors, 312 Century Building, St. Louis.

☞ Signature of contributor, for reproduction, should be sent with every article, on a separate slip; use heavy ink, and allow autograph to dry without applying blotter.

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Medical Laws and Medical Organization in the State of Illinois.

A SYMPOSIUM — ARTICLE II.

Local Medical Societies and Their Relation to District and State Societies.

BY W. T. MOFFETT, M. D.,

WILLIAMSVILLE, ILL.

Representing the Sangamon County Medical Society.

Read before the Morgan County Medical Society, April 12, 1900.

THE LOCAL medical society is to the medical profession what the family is to the nation. The District Medical society may be compared to the community; the State Society may represent the commonwealth; and the National Society may be considered the Medical Nation. But medicine—science—is not bounded by rivers, seas and mountains; it is world-wide in its scope, so the international societies may well represent Tennyson's poetic forecast of a future,

"Parliament of man, the federation of the world."

Not many of the busy country practitioners will attend the annual meetings of the State society, and but few of the city practitioners will attend the National society meetings, so the local society must serve the average physician in bringing him in closer relationship with his co-laborer, in inter-

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esting him in original research, in stimulating him to a deeper search into the literature of medicine, and become in a manner his post-graduate teacher.

It might well be asked, "Why all physicians do not join some medical society?" Can it be that the societies and their discussions are not helpful to physicians? Surely not. Many physicians think they are too busy; some do not feel able to write a paper, or are timid about taking part in the discussions; and some, I am sorry to say, are satisfied with what they have learned, and are content to allow any law, however harmful, to be passed, so it is no trouble or expense to them.

To those who think they are too busy, I would say, "it is a mistake to allow your work to so crowd you that you cannot spare the time for fraternal discussion of the diseases which you are daily called upon to treat. If you have learned much by experience, it is your sacred duty to impart some of your knowledge to the profession. And none have become so proficient that they might not learn some useful fact even from an humble country doctor.

To those who feel timid about taking an active part, I would say, Come anyway and profit by listening to others; then make an effort; try to prepare a paper on some subject in which you are particularly interested. It may be that you have given much thought to some obscure or overlooked point that would be helpful to many. By practice you can learn to write for the local society and to participate in the discussions.

To those who already "know it all," what can I say? May you be enlightened! Medicine is not a finished science; the wheels of progress have not completed their journey, they have but gotten fairly on the way.

To those who are indifferent I might say: come out of your hermit cave; give of your knowledge and experience, and receive of the knowledge and experience of your co-laborers.

It is in the local society that the topics of greatest interest to the general practitioner are discussed. It is there that many personal enmities may be wisely submerged beneath the tide of fraternal sympathy and brotherly interest.

The local society should be a magnet constantly exerting an attractive influence upon the local practitioner to draw them into relationship with the medical family, and should serve as a recruiting office to interest and enlist its members for the district, state and national societies.

I am in favor of a local medical library in connection with local societies. There are few of the busy practitioners who feel able to buy as complete a reference library as they feel the need of, and there are few who could not spare some volume for such a purpose. Many physicians have a number of volumes which are a little old and which they rarely consult which might be very helpful to a member who wished to search the literature on some subject. Many physicians would gladly donate their entire libraries when they retire from practice, or when they lay down their life's work, as so many do, "dying in the harness."

There are, no doubt, other valuable features which each local society might bring out which would be helpful in inducing the physicians in their

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locality to attend. The Sangamon County Medical Society gives a lunch at the close of each meeting. This is a very pleasant and social feature. The Morgan County Medical Society, whose guests we are, has a well equipped medical library, and I dare say that it is not only a help to the members, but that it has a favorable influence on the decision of prospective members. This society also publishes a modest journal of its proceedings, which heeps all members in touch with the society even when they miss a meeting.

Quackery, which I believe is the cause of medical legislation, has ever been rampant, and is no near dead now than hundreds of years ago. In fact, it is very much alive. Quackery arises from the desire of the ignorant, uneducated and incompetent to secure the emoluments of medical practice regardless of their unfitness to minister to the sick.

Quackery is organized with means to gain a hearing in our legislatures, and in order to defeat this hydra-headed monster we must unite and fight together; and we may best do this by each supporting the local and district societies, and they in turn supporting the State and National societies.

The cure for quackery is not, as some might teach, more quackery, but education. The people must be taught more of the structure, physiology and functions of the human organism and of the pathologic nature of disease; of the nature of psychologic disorders, of the limitation of suggestion and of the bounds of scientific medicine.

In addition to this, the quacks must themselves be educated. I contend that a properly educated physician will not resort to quackery. If we can secure legislation which will require all who wish to practice the healing art, whether by drugs, by diet, hygiene, baths, massage, prayer, faith, absent treatment (whatever that is) hypnotism or any other recognized mode of treating the sick, to first secure a thorough knowledge of anatomy, physiology, hygiene, pathology, bacteriology and allied branches, they will not practice quackery. Education is the great eliminator of error

Let us strive for legislation which requires all who assume the responsibility of treating the sick to at least take the minimum of requirements in all branches of medical science, and to become familiar with the nature of disease. Let them study the human organism and its diseases for four years, and then if they are brave enough to "throw physic to the dogs" and rely on some hocus-pocus, and be held accountable before the law for crimes of omission, let them do so.

What, then, can the local medical society do to further such legislation? It should get in touch with the legislators from its locality; appoint a committee, if necessary, to wait upon them, and call their attention to the needs of medical legislation, and, if necessary, to bring a little pressure to bear, suggest to them that the medical profession with the influence which it has, has an eye on their attitude to this matter, and will remember them on the day that they appear for re-election.

The old adage, "in union there is strength," is very true, and truer here than most physicians are aware of. Every scientific, progressive

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member of the regular medical profession should be a member of a local medical society, and every member of a local medical society should be a member and supporter of the State society; and it would repay every member of these societies to belong to the American Medical Association.

If we expect to secure legislation, which is not calculated to license and shield quackery, we must have concerted action.

The attitude of the large and representative medical societies and their memorials to the State and National legislative bodies will have more weight than many scattering memorials from local societies or individual physicians. The local societies are the hope of the State and National societies. There are at present local societies in but about forty of the counties of the state, and about sixty counties have no local society. Many of these could hardly secure a large enough membership to maintain interest. A great many of these counties have easy access to district societies which serve them in lieu of local societies. A well attended district society is better than several dead county or local societies.

It was from the influence of local societies that our State society was organized.

The Rock River Medical Society was organized on February 17th, 1846. It was probably the first medical society organized in this state. It was composed of many notable practitioners, who became prominent in the state society, but the Rock River Medical Society was of short life.

About this same time—a little later in the year—the Æsculapius Medical Society, now called the Æsculapian Society of the Wabash Valley was organized. It is still in existence and has a larger membership, and is one of the strongest in the State.

In 1847 the Medical Society of La Salle and adjoining counties was organized. Its name was afterwards changed to the Ottawa Medico-Chirurgical Association, and at a meeting held in Ottawa in June, 1849, a resolution was passed to issue a circular to the medical societies in the State proposing that a convention be held for the organization of a State medical society. This convention was held June 4th, 1850, in Springfield, and the Illinois State Medical Society was organized. The organization of local societies was recommended.

The Peoria District Medical Society was organized April 19th, 1848. It is now called the Peoria City Medical Society.

The Morgan County Medical Society was organized in 1866, and has had a long and useful existence, and I trust that the years of the future will prove that it is but in its infancy now. May it have long life.

Many societies throughout the State have existed in a precarious manner for a time and entered into a condition of inanition. They need a tonic; perhaps they are suffering from auto-intoxication. Petty jealousies and personal enmities are poisons which interfere with the health of medical societies, and should be eliminated. We should strive to extinguish all enmities in the interest of and for the advancement of science.

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On Enlarged Glands in Children—A Surgico-Pathological Study, with Remarks on the Lymph System and Its Relations to Immunity.

BY DR. CARL LUDWIG SCHLEICH,

BERLIN, GERMANY.

AN OLDER medical colleague once brought to a Berlin surgeon, by special request of the parents, a child, aged 7½ years, with a bilateral multiple lymphoma of the neck. The surgeon was to decide whether or not the child should undergo an operation. In harmony with the ideas which prevailed at that period, the surgeon advised immediate operative interference, the glands being depots of a pernicious virus which, even in the event of their gradual involution, would be a source of permanent danger through the possibility of the generalization of the basic disease—tuberculosis. The experienced family practitioner shook his head at the zealously unfolded views of his junior, and objected in the following strain: "My dear colleague, there are other children in this patient's family, aged, respectively, 21, 17, 12 and 8 years, and each of them had the same glandular affection when they were of this patient's age, and in all of these cases the glands returned to their natural size without operation. You may see these former patients of mine, and you will be unable to detect a trace of the former dyscrasia." The operation was not performed, and now—ten years later—there is not a trace of lymphoma, scrofula, or tuberculosis to be met with in the fine-appearing young man. The surgeon who went through this experience is myself, and I believe that many of my special colleagues will be able to recall similar happenings in cases of lymphoma, which were not extirpated, but left to internal medication. I cannot, of course, speak for the United States in a matter of this kind, but it is certain that in Germany we have no fixed and uniform indications for the surgical treatment of enlarged ganglia. Where one surgeon would operate, another would pursue a course of diet and internal remedies. Again, after the glands have broken down, one surgeon performs total excision, where another would content himself with incision, with or without the subsequent use of the curette.

I shall make the attempt, founded upon a particularly attentive following up of numerous cases of lymphoma (such as are afforded by the clinic and poliçlinic of a great city), to define my indications for the surgical therapy of enlarged glands in children, in clear, precise fundamental conceptions, and to briefly discuss, when possible, certain problems in general pathology. Since my experience, related at the beginning of this article, I have felt an urgent need of arriving at more precise notions upon this subject than have heretofore been given out *ex cathedra* in Germany.

According to the most recent researches, particularly of the Italian School (see Virchow's Archives, Vol. 156, Manfredi), it may be regarded as proven that the lymph-ganglia, in accordance with an old and widespread belief, are actually an apparatus not only for filtration but also for render-

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ing innocuous the most varied kinds of virus. According to the views of Grünwald and Cornet, the ganglia along the respiratory tract constitute a protective wall against the penetration of all kinds of matter and bacilli, and especially of the tubercle bacillus. In this way the lymph-ganglia, as a whole, form an enormously important protective mechanism against the infection of the body at large by a definite peripheric current of lymph; and from this standpoint we ought be very cautious in radically extirpating these structures. In fact I know of three cases of malignant infection of the upper extremity in surgeons who had undergone the radical extirpation of the lymph ganglia of the arm. It was readily apparent that every injury in the territory of the lymph-radicles of the affected side led to more or less severe general symptoms, from which one of the number, Hans Schmid, of Stettin, perished; while infection af the opposite arm, which retained its lymph-ganglia intact, ran its course harmlessiy and without generalization. A pathologist whom I knew had his right axillary glands removed, and after a post-mortem infection in the same extremity developed symptoms like tetanus. I myself performed total extirpation of the left cervical ganglia in a 9-year-old girl. Four months later (healing had been aseptic throughout), the child developed an attack, her first, of erysipelas of the corresponding side of the head, without any demonstrable injury. Within the ensuing two years she underwent a number of severe attacks of the same malady. Professor Riedel was the first to report several cases of elephantiasis of scrotum and penis many years after total extirpation of the inguinal glands, whereby it was evident that hyperplasia of the connective tissue layer of the lymph-radicles began when the protection of the ganglia had been withdrawn. I myself have seen three cases of elephantiasis in the territory from which the ganglia had been extirpated. Manfredi's work (*vide supra*) gives the key to all these facts: Since the network of lymph-channels arrests and filters the numerous particles suspended in the lymph, with the result that the filtrate undergoes a weakening in its virulence, so that the virus may be conceived as latent, one may, with the author, look upon this attenuation of virus as a purely mecnanical problem; and, in fact, we believe that it may be shown that the doctrine of antitoxins in the sense of humoral pathology is wholly untenable* for the following reasons: I have been able to show experimentally that toxic substances, like morphine, cocaine, caffein, etc., may be subcutaneously incorporated in ever-increasing doses without the phenomena of intoxication; but that when even the smallest commencing doses are introduced within the cranial cavity of animals through a trephine-opening, a direct toxic action is observed. These experiments have been confirmed by Bouchard. The reason, therefore, that the morphine-eater requires constantly increasing doses of his drug to satisfy his cravings, is not because his cerebrum has become accustomed to the following action of the morphine, but is due rather to the fact that by the hypodermic method more and more of the drug must be incorporated on account of the continual chemical irritation of the lymph-channels with resulting narrowing of caliber; so that

*Gottstein and Schleich. Immunitat und Serum-Therapie, 2 Aufl., Berlin, 1897. C. J. Schleich, Neue Methoden der Wundheilung. Berlin, 1899.

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only a limited portion of the injected drug can be absorbed and reach the brain. The balance of the drug is retained within the lymphatics, in which situation it becomes chemically indifferent through disoxidation, oxidation, transformation, subdivision, etc. There is therefore originally only a local cellular immunity at the site of entry, restricted to a single division of the lymphatic system, which is dependent upon previous injury. Herein there is a certain antagonism between the chylous and peripheral lymphatic systems. Koch was therefore able to infect rams (by the mesenteric lymphatics) which had been immunized by Pasteur himself against anthrax, by feeding them with anthrax-bacillus in cultures; because the repeated subcutaneous injection has led to irritation and obliteration of lymphatic vessels with resulting impermeability toward the virus.

That immunity is but a cellular, local conception, also appears from Pasteur's anti-rabic inoculations, since animals immunized to rabies are attacked by the disease when the virus is implanted beneath the dura mater. The relative acquired immunity toward scarlatina and measles may also be conceived as a closing up to the lymph-radicles at the site of entry of the virus. Only in the manner can be explained the fact that children with acquired immunity to epidemic scarlatina may still contract "surgical scarlatina." The ordinary avenues of infection, whether respiratory or digestive, have been rendered impervious by obliteration of the lymphatics in those localities, but the virus may still gain the system by way of the cutaneous lymphatics—or, in other words, the entire body has not been rendered immune by the disease, but only a definite local territory. Immunity to variola also appears to me to be only locally acquired and attainable; for if the virus of small-pox be introduced directly into the blood, repeated antecedent vaccination will not prevent the development of the disease. The natural mechanism of variolous infection by way of the cutaneous system may be imitated in secondary artificial immunity; and when vaccination does not protect, which happens in rare instances, it is probable that the virus of the disease has infected the body through an unusual route—the intestine for example.

The diversion into the territory of the theory of the functions of the lymph ganglia has for its justification the complexity and importance of these structures with regard to the animal economy. According to our conception of the subject, it is no longer justifiable to extirpate off-hand the lymph ganglia of a given locality—neck, armpit, groin, etc. The direct danger to which we expose a given locality of the body, by removing its proper ganglia, would be much more apparent were it not for the fact that "total extirpation" is in most cases only an illusion. Even the most skilful operators seldom or never succeed in removing every bit of glandular structure. Not only do some of the ganglionic bodies remain *in situ*, but those placed more centrally toward the thoracic duct are able to act vicariously. This, however, is not the invariable consequence, for compensation fails at times, and in these cases life is endangered by the extirpation of the protecting mechanism.

If we now wish to establish fixed rules to govern our practice in the surgical therapy of the glandular affections of children, we can accomplish

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this end only upon a basis of pathological anatomy, conjoined with clinical experience. In so far as the glandular engorgement is the expression of a pure inflammatory and cellular irritation ; in so far as the hyperplasia is dependent throughout upon the absorption of bacteria or toxins, a total extirpation of the glands is an operative error, on account of the danger to which the organism would be exposed. I have in mind especially the ganglia in the submaxillary region and in the cervical fascia. Inflammatory irritation of these ganglia involves a fusion of the glandular capsule and periglandular tissue with the great vessels of the neck, and the possibility of death by hemorrhage plays a great part in total extirpation of the cervical glands of children. Pathology shows, however,—and clinical experience is corroborative—that pure inflammatory hyperplasia without suppuration may by appropriate diet and certain medication be influenced in the direction of resolution ; even when such hyperplasia has persisted for many months. A submaxillary ganglion which has become enlarged through some form of dental irritation, can persist for months as a tumor of the size of an apple—painless, movable and devoid of superjacent reddening or fever—and may finally undergo absorption through fatty degeneration. As the various forms of regressive metamorphosis which the glands may undergo fall under three heads, viz., fatty degeneration, caseation, and suppuration, our therapy must be based upon recognition of which one of these terminations is likely to occur. Strict observation of the general condition of our patient may often enable us to determine this question. If the enlarged glands tend to fatty degeneration, i. e., if the process is a purely inflammatory one, the general condition will not be in the least affected. Here there is no question of an underlying cachexia, but of an active local irritation, or immunization process, which, under certain conditions, may even be of benefit to the organism at large. The enlarged glands which follow scarlatina, measles, affections of the mouth (pulpitis, aphthæ, traumatic ulcers) are the expression of a curative process, are a symptom of the defensive forces of the individual, and to remove them, as long as they persist in the stage of a harmless cellular infiltration, would be as unnatural as to push the use of quinine in every case of fever until the temperature should become normal. If we should remove all the hyperplastic glands originating in consequence of some peripheral inflammation, we would invariably get badly healing wounds, because the noxia arrested within the adenoid tissue would readily be disseminated by the operation throughout the lymph channels in the area of the wound.

As Manfredi has shown, the rendering innocuous of the irritating substance within the microscopic labyrinth of the ganglia requires a certain interval of time, i. e., the hyperplasia persists until the oxidation or reduction of the poison is complete. From this instant the state of irritation vanishes, and the superfluous cellular deposit undergoes fatty degeneration, exactly as is the case with the functionally hyperplastic uterus after expulsion of the fetus. It is an error to believe that the muscular substance of the uterus is the only tissue which undergoes involution under these circumstances. These retrograde changes in the uterus are but a physiological paradigm for a whole series of pathological processes. Other tumors

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beside myoma may undergo involution; papillomata (warts), cysts, adenomata, even sarcomata, and, perhaps, carcinomata as well, may undergo benign resolution.

In purely inflammatory hyperplasia of the glands, we may see resolution follow a strengthening of the general constitution; and in many instances this resolution may be induced by medicaments. I usually employ in such cases solution of iodide of potash (1:200) in teaspoonful dose, associated with the external application of my hydrargyrum-pepton paste.* Iodine, as well as mercury, exerts the same specific action in these cases, as it does in syphilis. In the *Therapeutische Monatschift*, 1890, I have shown in an experimental study that both medicaments cause emigration of leucocytes in the locality in which the circulation is compromised. Heinz, of Breslau, has confirmed this experimentally, and I have demonstrated that this emigration involves the absorption of cell-particles which have undergone fatty degeneration. Now since this fatty degeneration is the rule in syphilis, iodine and mercury can exert only an apparently specific action in this affection. These drugs are of equal advantage in all similar processes which terminate in fatty degeneration of the cellular elements; for example, iodide of potash is an excellent remedy to promote granulation, just as it is adapted to hasten the resorption of hyperplastic lymph ganglia which have undergone fatty degeneration. But even when caseation is present, and the pathological process is in relation to the presence of tubercle bacilli in the labyrinth of the gland, I find that a dose of mercury has the same marvelous effect which it exerts in syphilis. That iodide of potash may be used with benefit in scrofulous glands is generally admitted. We are therefore justified in treating purely hyperplastic glands under all circumstances with measures intended to produce absorption. This question is bound up with the subject of the recognition of the transition of a hyperplasia into caseation, or suppuration. To determine this transformation, we have to rely upon general symptoms. If we find enlarged glands in children who are pale and anemic, with thick lips studded with crusts, who further exhibit photophobia and rhinorrhea, we have before us that status lymphaticus, which consists of a hypertrophy of the entire lymphatic system, and a saturation of the tissues with plasma—a stasis of the lymphatic circulation, a chronic hyperemia of the white lymph-blood, a lymphomatous plethora. These children are, from the start, more vulnerable than others. Every illness runs a severe, threatening course. Vaccinations, injections of serum, processes which in themselves are innocent, may run a fatal course. This status lymphaticus is a disposition to disease of the most

*This is prepared as follows:

Pepton sicci	
Amyli tritici	
Zinci oxydati	
Gummi Arabici	aa 15
Subtil. pulverisate	30

Aquæ distillatæ et sterilisatæ q. s. ut fiat.
"Pasta peptonal Schleich" consistentia mellis.
Cui addi.
Lysoli.
Ol Melessæ 3

With this paste 30 gms. metallic mercury are extinguished, this being readily accomplished with a mortar, and 10 gms. of the mixture diluted with water are to be applied with a large brush, and allowed to dry thoroughly.

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comprehensive type. If we find enlarged glands associated with this lymphatic disposition, we may feel assured that they contain cheesy foci. We are then confronted with the question of the expediency of operating on the glands. As long as the general condition is relatively good, and especially if fever, emaciation and anorexia are absent, we should not interfere. Scrofula is a dyscrasia, a disposition, and to operate on these glands is to merely combat a symptom. Besides it is these very children who are placed in peril by an operation. They are always menaced by miliary tuberculosis, the mechanical rupture of the caseous-embolic focus within the lymph-channels directly into the blood-streams. I, therefore, do not operate for caseous glands unless life is threatened.

Caseous glands may often be recognized by their contour; while the purely hyperplastic glands have the rounded, succulent appearance of a plum, the caseous glands have the angular outline of a bean, or plum-stone. They are also movable under the skin, less adherent to their environment, and feel like foreign bodies embedded beneath the skin, flattened pieces of metal or glass in a fibrous capsule This peculiarity of contour often greatly facilitates the removal of the glands, and therefore, in view of the danger of dissemination, I prefer a sort of methodical enucleation to total extirpation. When the child has become cachectic, and an operation is earnestly requested, my custom is to split the capsule, and enucleate the contents with a large curette. If there are present rosary-like chains of caseous glands, removal of the caseous portions and retention capsules causes the field of operation to present a number of hemispherical hollows, like so many egg-cups.

This enucleation of the substance of the glands has the advantage of the much smaller risk of general infection; and, in opposition to total extirpation it preserves the power of regeneration and future function of the glands, an advantage similarly possessed by enucleation of the thyroid, as compared with total extirpation. We surgeons must accustom ourselves to preserving the tissues of the lymph-ganglia as something of importance in the general economy. The profuse hemorrhage which may accompany methodical enucleation of the ganglia by my method, may invariably be controlled by a tamponade. I have very frequently observed that when a caseous focus has been removed from a gland, the remaining hyperplastic tissue readily undergoes resolution. Therefore I reject the operation of total extirpation for the caseous glands of *children;* especially because of the great regenerating power of the growing organism. In the case of adults it might be otherwise, but we will not stop to discuss this subject.

We still have to discuss the questions of suppuration and tumor-like formation. I distinguish between the two forms of suppuration, viz., a diffuse, confluent type, and a miliary, disseminate form with small, multiple foci. Both must be treated by operation. In the first form I employ incision, followed by a careful tamponade and frequent dressing (glutol powder and sterile gauze); this management is fully sufficient for a complete cure. In the multiple, disseminate, chronic form, I prefer total excision, but I do not attempt an absolute, total resolution of all the adherent capsule—this radical procedure has often led to a fatal result through hemor-

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rhage, or infection. If there are no large blood-vessels in immediate proximity, it is well to remove as much of the capsule as possible; but any attempt to extirpate all the capsule, I regard as foolhardy in itself, and of no value in determining a favorable result. It very materially prolongs the time of the operation, besides increasing the risk. In traumatic bubo, such as the gonorrheal adenitis of adults, I also employ a simple incision. It is necessary to tampon carefully, long and often, for if the focus is not removed, the process may start up afresh.

I sum up my views on the management of enlarged glands in children, as follows: First, there are too many cases of total extirpation, when methodical enucleation, or simple incision, would have fully sufficed for a cure. Extirpation of lymph ganglia in children, with the lymphatic dyscrasia is an error, for it is the constitution which is diseased, and not the local area. Cheesy hyperplasia should be treated by enucleation, provided that a fat diet, iodide of potash, and mercurials fail to produce resolution. A syphilitic taint underlies cheesy glands oftener than is generally believed, which makes the advisability of specific medication the more urgent in these cases. In simple abscesses, we should incise and tampon,* while in multiple suppuration we should carefully extirpate the foci, without any attempt to excise adherent capsule. When the glands are the seat of tumor-like enlargements, the most radical treatment is the most rational procedure.

I am well aware that the above views will not receive thorough approval. The surgeon is technically inclined to make a thorough piece of work when he operates, even if now and then some risk is encountered. The main thing in medicine, however, is to cure, and every procedure that cures is a correct one. It appears to me that a decennium of foolhardiness ought to be succeeded by a less venturesome period. Many affections have been treated in the most extensive and radical fashion, as if we were at the very flood tide of operative interference, while more extended experience shows us that we can often accomplish as much with less labor and risk. This is especially true of gynecological surgery, and of the resection of joints, and of operative treatment of tuberculosis, and finally, in my opinion, of the surgical management of enlarged glands in children.—*Pediatrics*.

The Essentials of Hematology.—A booklet under the above title has recently been issued by the Palisade Manufacturing Co., of Yonkers, N. Y. It contains in detail a complete guide to the clinical examination of the blood for diagnostic purposes. It is seldom that so much of real scientific worth, and the fruit of so great labor, is presented to the profession for the asking; were there a charge for it we would still think that it should reach every doctor who makes any pretense of being up-to-date, for nowhere else have we seen the subject handled in so practical a manner, or so superbly illustrated. If you have failed to receive a copy a card to the Palisade people will bring it.

* For healing abscess cavities and granulating surfaces left after operations on the glands, I have found a 10 per cent borated vaselin, applied daily after the eighth day, to give the best results.

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Efficiency of Our Health Laws.

BY S. T. HURST, M. D.

GREENVIEW, ILL.

Read at Jacksonville, April 13, 1900.

AFTER looking over our laws of 1877 to 1899, I notice many changes. The first law was deficient and lenient to under-graduates, with a ten-year clause, and yet it did much good and elevated the average standard of the profession. The itinerant license clause was pernicious, and it seems we can never get rid of it. The discretionary power seemed ample, and yet for some reason, energetic though the Board was, quackery of this kind flourished. Palpable frauds were hunted down, prosecuted and many were driven out. This law stood the test of the courts, but the Board never had the united support of the legitimate profession in the State. This Board enforced more general vaccination than I have since seen. Rivalry between, and increase of medical colleges, with an ever increasing political influence, and apathy on the part of the people generally, brought about the necessity for a better law, and consequently at every State society meeting in Illinois we devote much time to this subject. So far we have made since 1877 but little advancement. The "Cheap John" medical colleges have multiplied, and the irregular and disreputable class of practitioners have increased, and I think many such graduates have found their way not only into practice in the State, but into our local Societies and the State Society as well. If they are legally registered, and apply, they will probably get in all right.

The object of medical practice laws are to prevent all or any from the practice of medicine who are unqualified or dishonorable in character or ethics. Our laws now and previously are not extensive, clear and restrictive enough. If we can enact a law and enforce it, that shall require every applicant for registration to undergo an examination, fair and rigid, by a competent examining board before beginning practice, we should be in a fair way to "kingdom come" in the healing art. But it is a fact, much as we deplore it, we are well along in the direction of reducing the hitherto profession of medicine to the level of the trades or callings. The physician is becoming more and more a business man, and we are drifting away from the code of ethics, and everyone to be his own judge of his conduct, and most if not all of our Medical Societies have members who disregard the time honored code. This condition, in my opinion, will grow in our profession until the great influence over the laity once held by the profession is reduced to the level of the merchant or mechanic, if indeed we have not already reached it. If our laws cannot be so constructed and enforced as to hold the licensed or certificated physicians within the rules of the code, we are surely destined to become a trade and not a profession. Then we shall need but have a law that will insure good acquirement in the science of medicine and allow morals to take care of themselves. This condition now largely exists, but is noticed only in extreme cases. The ranks are being recruited annually and liberally. More schemes and de-

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vices must be found to find place and earn or make a livelihood. One way to do this is to locate, and either join church or fall in with saloon rounders, or perhaps join a lodge; in other cases manage to get on the teaching force of a medical college, all of which means one may more quickly become self-sustaining. Now I think we are rapidly approaching the time when we shall have no code of ethics, simply because it will not be needed in our business. The public vender of nostrums, "magnetic healer," faith cure fetich, christian science and osteopathic fadist can all come on equal footing before a competent examining board, and if he can successfully demonstrate his scientific attainment in all the learning necessary to a thorough knowledge of medicine, obtain license to practice, and thus become honorable in his calling. But if he fail in the rigid examination, he would seek greener pastures. I have wondered if Illinois could not, after such an ordeal for everyone who is in some way engaged in the healing art, or pretends to be, passed we could not furnish of the surplus, enough to supply the Philippines with a doctor in every community. The laity generally know but little or nothing of our medical or health laws; no newspaper has ever championed the cause. The people are an important party in the case. We have so far failed to reach and inform them, and so we are acting as wards of the people without their consent. And further, it appears that some of our court judges have a very limited idea of any difference between expert scientific testimony and that of a common witness; and there seems to be good reason to believe that if we are ever to have efficient laws, we must begin at the bottom and establish a legal medical standard, and square, and line, and hew to it. Again our present law allows, I believe, a salary to no member of the Board except the Secretary.

No wonder Dr. Moyer said, in urging Dr. Webster for a vacancy on the Board, (Ill. Med. Jour. Jan., 1900), that "the position was purely honorary." We cannot reasonably expect an efficient Board who serve without pay. So finally I conclude,

1. Our laws are insufficient in that an examination does not apply to all alike.

2. They do not prevent quackery, but instead take from each itinerant a hundred dollars a month, and the Board or funds of State profit by the business.

3. They do not prevent the forementioned frauds and fads from treating the sick and ailing, provided they use no medicines.

4. Because there are already licensed a great number who ethically are unworthy, though some of them may be able men, in high positions.

5. They do not provide against removal from the Board by a whimsical or capricious executive.

6. And greatest of all, our medical laws are not understood by the common people, who are and always will be the backbone of all law in a republican form of government.

Desiring a free discussion of all the subdivisions of our topics here today, I have hastily penciled these notes to aid in the direction of the uplift to the medical profession in our State.

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The Treatment of Incipient Phthisis with Clinical Reports.

BY ROBERT C. KENNER, A. M., M. D..

LOUISVILLE, KY.

EARLY IN my professional career, I became convinced that phthisis was a disease that frequently ended in cure. In fact I found many examples in post-mortem examinations of healed cavities. In several instances these cavities showed that the tuberculosis process had once been active; cavities had been formed in the lung substance and they had been in this cicatrized condition for a number of years, the patients having died of some distinctly different disease. For a time I thought, like many physicians, that the remedy which had acted so happily in these cases was a secret which was entombed with the patient. I have come to think differently, however. I am not about to proclaim a new consumption cure, but conscientiously hold that we have a means of treating cases of incipient phthisis which very often leads to the most successful results.

In the first place, we shall have to begin with the improvement of our patient's nutrition. This is to be accomplished by the giving of remedies which aid digestion. These patients have, as one of the first symptoms, impairment of the process of digestion. This naturally increases the tissue waste, which is already largely out of proportion, and makes every feature of the disease more grave. The patient is to eat a generous diet composed of food which is easily digested and which nourishes the tissues well. He should take plenty of out door exercise, but should avoid going out during the prevalence of a south wind. The clothing should be warm; a chamois vest worn between the undershirt and dress shirt protects the patient against the effect of necessary exposure, and prevents many an attack of neuralgia and bronchitis. When it is possible I have my patients spend the winter in Arizona or Southern California. An ocean voyage often proves highly beneficial.

One matter demands our attention from the start, and that is the cough. To allow these patients to cough is to permit them to lose sleep, and in that way alone the strength of the patient is wasted. To overcome the harassing effect of the cough I rely upon codeine. This agent does not derange the secretions as do other opiates, and I have not found any agent that acts so happily. I exhibit it in tablets of one-fourth grain, having the patient take a tablet when the cough is annoying. I do not order the tablets to be taken regularly, but one every time it is necessary to relieve the cough, to be repeated often enough to accomplish this purpose.

To improve the digestion and nourish the tissues which are constantly becoming more impoverished from the great uncompensated waste, and to retard the progress of the phthisical process and bring about a cure, I rely upon "Maltine with Creosote". This preparation is capable of rendering the most valuable service. Maltine is one of our best reconstructives,

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and its power in assisting digestion is most marked. Creosote holds the first place in the estimation of the profession in the treatment of phthisis. In fact there is no remedy approximating it in the estimation of the profession. The combination of Maltine with Creosote is, therefore, in my estimation, an ideal remedy for incipient phthisis, and has brought me the happiest results. I believe there is no remedy upon which we can depend with more confidence in the treatment of incipient consumption than "Maltine with Creosote." I submit a few clinical reports which demonstrate the value of the treatment advocated:

Mr. W. S., age 19. This young fellow came to my office in August for treatment. He had well marked dullness in the apex of the right lung and other marked symptoms of incipient phthisis. His cough was most distressing. He took codeine tablets often enough to keep the cough in subjection. He began with the first visit to take "Maltine with Creosote" in doses of a tablespoonful four times daily. This patient improved appreciably after having taken the remedy for two weeks. He took outdoor exercise, his chest was protected, and his diet regulated and liberal. He did not suffer from indigestion after beginning with the remedy. His progress was uninterrupted. He gained flesh, his night sweats and cough gradually became extinct, and at the end of two months he had regained his former weight; there was no cough, and he felt strong and well. He is now going about as usual, entirely well.

Gretchen S., age 21. This girl had night sweats, indigestion, an inconsequential cough and her menses had not appeared for three months. She had expectorated blood, though the quantity was not large. She took codeine, as already directed, and began at once with "Maltine with Creosote" in doses of a tablespoonful, four times daily. The patient got along well, and at the end of eight weeks there was neither cough nor indigestion. Her menses returned and she had nearly regained most of her former weight. After a month's further use, her weight was entirely restored and she is now well in every way.

Mr. P., age 51. This gentleman had a cough which he thought of no particular consequence, but it had persisted for six mouths and had grown worse. I was sure that his disease was incipient consumption. I put him on "Maltine with Creosote," with the usual remedies for complications. He also took care to protect his chest and avoided going out during the prevalence of a south wind. He improved steadily and recovered entirely in three months from the time he began the treatment. He now takes no medicine whatever and is well; says he is as strong as ever.

Miss H., age 41. This lady was subjected to a great deal of exposure in going about as a canvasser. When she applied for treatment she had a violent cough, had lost flesh considerably and her menses had ceased to appear regularly. She was placed on "Maltine with Creosote" and made an entire recovery within six weeks. She now menstruates regularly and is well in every respect, having no cough or other untoward symptoms.

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Mr. A. I. I., age 19. This patient suffered from indigestion, night sweats, loss of flesh, and an inconsequential cough. He was put on "Maltine with Creosote." This remedy together with codeine he took for eight weeks. At the end of this time he had gained flesh very appreciably, had ceased to cough and his digestion was perfect. He has now regained almost his former weight, is strong, in excellent spirits and his entire restoration to weight and strength is only a question of a very brief time.

THE AMERICAN MEDICAL ASSOCIATION.—To those of the profession who make their attendance on the meetings of the American Medical Association their summer vacation, the prospect this year is one exceptionally pleasing. The work of the Association will be of greater scientific value than ever before, the fact that there is so much in the way of recreation at hand will not be allowed to detract from the interest in the real purpose of the Association. Yet Atlantic City is one of our most famed seaside resorts, and in itself will make the trip well worth while, in addition it has the advantage of being so close to New York, Philadelphia and Washington, that side trips to these cities will of course attract many. The trip east is one of beauty beyond the expectation of the average traveler; the Alleghanies should be seen by daylight, else some of the grandest of our American scenery will be missed. Through this region all routes give a glimpse of what eastern mountain scenery can be, but none gives a more satisfactory demonstration from start to finish than does the B. & O. S-W. route. The B. & O. is planning to carry a large delegation from the west, and nothing is being left undone which could contribute to the pleasure of its patrons; the local agents remind us that travel will be heavy early in June, and as they desire us to have things pretty much our own way on this train they advise that sleeper reservations be made some days in advance; this may be done by applying direct to the city passenger agent, Mr. F. D. Gildersleeve, or the editor of the FORTNIGHTLY will be pleased to attend to this for any who may wish. A rate of one fare and a third, on the certificate plan, will be effective for this meeting.

WHERE TO STOP IN ATLANTIC CITY.—This question may asked with impunity by those who have never visited this city by the sea, but after one has once had the pleasure of being entertained at Hotel Pierrepont, the question becomes superfluous. To the delegate who contemplates attendance at the American Medical Association meeting, we would say, write to Channell Bros., managers of the "Pierrepont," and make early reservation of rooms, and your comfort is assured. The famous hotel is beautifully situated, convenient to the beach and to the convention hall, and its appointments and cuisine rank with the best in the country. Special rates may be obtained by those who apply early. Mr. John R. Pugh, who is well-known to Eastern travellers, is chief clerk of the "Pierrepont," and will be glad to greet old friends and make new ones.

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Reports on Progress.

COMPRISING THE REGULAR CONTRIBUTORS OF THE FORTNIGHTLY DEPARTMENT STAFF

GENERAL SURGERY.—C. E. Black, M. D., Jacksonville, Ill.

DISEASES OF THE CHEST—W. W. Bulette, M. D., Pueblo, Colo.

INTESTINAL AND RECTAL SURGERY—S. G. Gant, M. D., New York City.

DISEASES OF THE MIND—Frank C. Hoyt, M. D.

RHINOLOGY AND LARYNGOLOGY—John A. James James, M. D.

GENITO-URINARY SURGERY AND SYPHILOLOGY — Bransford Lewis, M. D.

OPHTHALMOLOGY—J. Ellis Jennings, M. D.

ORTHOPEDIC SURGERY — Phil. Hoffman, M. D.

GYNECOLOGY—Josephine Milligan, M. D., Jacksonville, Ill.

OBSTETRICS—R. B. Murphy, M. D.

MEDICINE — Frank Parsons Norbury, M. D.

CLIMATOLOGY—Hubert Work, M. D., Pueblo, Colo.

PATHOLOGY AND BACTERIOLOGY—Rutherford Gradwohl, M. D.

PARIS CORRESPONDENT — Thomas Linn, M. D., Paris, France.

NEW YORK CORRESPONDENT — E. Franklin Smith, M. D.

LONDON CORRESPONDENT — R. T. Hewlettt, M. D., M. R. C. P., Chief Bacteriological Laboratory, Jenner Institute of Preventive Medicine, London.

MEDICINE.

BY FRANK PARSONS NORBURY, M. D.

Formerly Resident Physician Pennsylvania Institution for Feeble-Minded Children; Formerly Assistant Physician Illinois Central Hospital for the Insane; Physician to Oak Lawn Sanitorium and Passavant Memorial Hospital; Neurologist to Our Savior's Hospital; Lecturer Psycho-Physics, Illinois College.

AND EGBERT W. FELL, B. S..

JACKSONVILLE, ILL.

Some Peculiar Phases of Typhoid Fever.—Janeway (*Medical News*, December 9, 1899) has observed three cases of tetany occurring during typhoid fever. He calls attention to the danger of mistaking the altered mental state, sometimes observed in the early stages of this disease, for mania or melancholia. Allied to this condition is the suicidal tendency which is at times developed; it comes on suddenly and patients should be carefully watched. Herpes labialis is of very infrequent occurrence in typhoid, and its presence should suggest the possibility of pneumonia or cerebro-spinal meningitis. A petechial eruption simulating typhus is sometimes observed. Excessive pain in the right illiac fossa at the onset may cause a mistake in diagnosis; but the history, a careful physical examination, and the absence of leucocytosis will usually exclude appendicitis. Two other conditions occasionally met with attacks of stomach and bowel trouble in the early part of the disease, subsiding in a day or two, and a drop of temperature lasting several hours, at the end of the first week. Among a large number of patients in institutions, the author has observed many atypic cases in which diagnosis would have been difficult or impossible but for the simultaneous occurrence in other patients. He did not use the Widal test.

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Tetanus, with Report of Cases.—Collus, *Physician and Surgeon*, January, 1900, calls attention to the great number of cases of tetanus occurring shortly after July 4th of last year, caused for the most part by wounds by wads from blank pistols. Although tetantoxin and spasmotoxin are powerful poisons they do not produce the same results when injected, as the true toxin of tetanus isolated by Brieger and Cohn. One seven-millionth grain of this toxin will produce fatal tetanus in a mouse, and one ten-thousandth grain is considered the lethal dose for a human being. The germ is in the soil, especially in foggy, damp places. The occurrence during the puerpeum was known to the ancients, but the subject has not received its deserved attention. Case I. Primipara, delivery by forceps resulting in slight laceration. On the eighth day stiffness and pain in spine developed. Temperature 101°. The next morning temperature was 108°, pulse rapid and thready; respiration rapid, and all symptoms of tetanus marked; spasm occurred frequently until 3 o'clock P. M., when the patient died, less than twenty hours after the first symptoms. Case II. Typical case occurring in male, aged 16 years. Infection resulted from toy pistol wound received July 4th. July 8th complained of stiffness of neck; temperature rose to 103° and the characteristic symptoms developed, resulting in death the next morning. About the only hope in treatment is prophylaxis. The serum treatment has not proved of much value; injections of carbolic acid have been reported successful in some cases; chloral, bromine, cannabis, indica and opium are used to control spasm. Wounds, no matter how trivial, should receive careful antiseptic treatment. The mortality is high; if recovery occurs it is because the infection is mild and not the result of treatment.

Causes, Diagnosis and Treatment of Cystitis.—In the *Medical News* of April 7th, 1900, appears a complete and comprehensive article with above title by Dr. Ramon Guiteras, a recognized authority on diseases of the genito-urinary tract. We reprint herewith portion of this paper on "Treatment of Cystitis Due to Tuberculosis." "In the treatment of tubercular cystitis, the practitioner encounters a condition that taxes all the resources at his command and he errs, as a rule, on the side of too much, rather than too little, treatment. In other words, it often happens that the more you treat the patient locally for his cystitis, the worse the condition becomes. It is, therefore, necessary to proceed cautiously in the treatment of this form of bladder inflammation, and, above all, is it important to improve the general condition of the patient as much as possible. If we were to treat patients suffering from tubercular cystitis along the same lines as pulmonary cases, namely, by sending them away to lead an open-air life under conditions that would improve their nutrition to the utmost, the condition would be much more rapidly improved or cured, than by anything that could be done by the ablest specialist of the period. Numerous remedies have been recommended by different authorities for the treatment of this form of cystitis, and naturally every practitioner who encounters this rebellious trouble grasps at anything that offers the probability of a cure. Guyon at one time advocated the use of intravesical injections of

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bichloride of mercury, 1 to 10,000, and since then many have been following his advice, but such a solution will rarely cure this disease, while it usually produces an irritation that is almost unbearable. Nitrate of silver and permanganate of potassium have the same effect. Boric acid and boro-glycerine irritate less, but do not seem to possess the power to ameliorate the disease. Recently iodoform injections have been advocated, and the procedure would seem to be founded on a logical basis. Three or four ounces of a five per cent solution of iodoform in liquid vaseline are injected into the bladder every two or three days, the patient being instructed to watch the stream when he urinates and stop the flow just as soon as the oil appears. This forms a permanent iodoform dressing of the bladder-wall, and in the hands of some of the French surgeons is said to have met with gratifying results. Personally, I have had better results with borolyptol in this class of cases than with any other remedy which I have employed. This seems to have a powerful germicidal effect, while the fact that it does not irritate the bladder renders it pleasant to the patient. It is used in the strength of from 1 in 8 to 1 in 16 in irrigations by the hydrostatic method. After a few irrigations at the office, the patient will be able to use it every night at home. I have now one patient under observation who suffered for a number of years from a most aggravating frequency of urination accompanied by pain, dependent upon a tubercular cystitis. Under this treatment the urine has cleared up, the tubercle bacilli have disappeared, and the patient can hold his urine from seven to nine hours at night, and from four to six hours during the day. Internally, in connection with any local treatment, an antispasmodic and internal antiseptic should be used as a palliative measure; it is wonderful how much relief may be given to the patient by this means, even although pus remains in the urine and the tubercle bacilli still be found. One patient has been coming to me for three months who was entirely relieved of his disagreeable subjective symptoms by a mixture containing 10 minims of the tincture of belladonna, 15 grains of benzoate of soda, and oil of gaultheria up to one drachm, t.i.d., although not until he was put on the borolyptol irrigation did the pus and tubercle bacilli in the urine diminish to any marked degree. The effect of the palliative internal medication is worthy of notice, in view of the fact that he had suffered for fourteen years and had been under the care of many different physicians without relief, having most probably been overtreated by too much instrumentation, and too frequent or too irritating irrigations."

Statistics of an Epidemic of Measles, including the Observation of Koplik's Spots.—This report was presented by Dr. Vanderpool Adriance at the meeting of the N. Y. Academy of Medicine (*Arch. of Pediatrics*, February, 1900). There had been 96 cases at the Nursery and Child's Hospital, most of whom were under five years of age. Second attacks developed in 16 cases, and diphtheria in 36. Mortality 15⅝ per cent; four deaths being due to diphtheria, 5 to pneumonia, 2 to pneumonia and colitis, and 4 to colitis. Koplik's spots were persent in 76 per cent of cases; in 20 per cent before the rash appeared. As the spots made their appearance after the catarrhal stage their observation was of no help in checking the spread of the disease.

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Society Proceedings.

PROGRAM OF MISSOURI STATE MEDICAL ASSOCIATION.

Forty-third Annual Meeting at Mexico.

Morning Session, May 15th.

1. Report of Ophthalmology and Otology, J. H. Thompson, Kansas City.

2. Entropion and Its Rational Treatment, J. L. Short, Kansas City.

3. Intra-Ocular Tumors, with Specimens, C. Barck, St. Louis.

4. Clinical Memoranda of Eye Cases, J. Ellis Jennings, St. Louis: (a) The Removal of a Bullet, which, Entering in Front of the Ear, Passed Forward and Inward, Cutting the Optic Nerve and Lodging in the Posterior Position of the Orbital Cavity; (b) Severe Headache and Other Nervous Symptoms Relieved by Correcting an Error of Refraction; (c) Insufficiency of the Internal Recti Muscles, and the Right and Wrong Way of Using Prisms; (d) A High Degree of Government Squint in a Patient Thirty-eight Years Old, Operation and Result; (e) Enucleation of an Eye, with Implantation of a Glass Ball into the Oribital Cavity.

5. Total Ciliectomy, M. F. Weyman, St. Joseph.

Discussion of Nos. 1, 2, 3, 4 and 5 opened by B. E. Fryer, Kansas City.

6. Diatheses as a Factor to be Considered in Diseases of the Nose, Throat and Ear, Fayette C. Ewing, St. Louis.

7. Limitations of the Laryngologist in the General Treatment of Nose and Throat Diseases, by H. W. Loeb, St. Louis.

8. What Not to Do in the Treatment of Diseases of the Ear, Nose and Throat, M. A. Goldstein, St. Louis.

9. Cases of Chronic Deafness from Catarrh Relieved by Tympanic Resection, Robert Barclay, St. Louis.

Discussion on Nos. 6, 7, 8 and 9 opened by Hal Foster, Kansas City.

10. Report on Bacteriology, J. J. Claussen, Kansas City.

11. Report on the Bacteriology of Scarlet Fever, R. B. H. Gradwohl, St. Louis.

Afternoon Session, May 15th.

12. Report on the Progress of Medicine, J. D. Brummall, Salisbury.

13. A Case of Idiopathic Acute Yellow Atrophy of the Liver, C. G. Crandall, St. Louis.

14. The use of Normal Salt Solution and Venesection in Croupous Pneumonia, Wm, Porter, St. Louis.

15. Points of Differential Diagnosis Between Inflammatory Rheumatism and Suppurative Osteo-myelitis, Tubercular Osteo-myelitis, Myostitis, Posterior Spinal Sclerosis, Neuritis, Neurasthenia, etc., George Halley, Kansas City.

Discussion on Nos. 12, 13, 14 and 15 opened by E. W. Shauffler, Kansas City; L. W. Dallas, Hunnewell.

16. Progress of Pediatrics, E. H. Miller, Liberty.

17. Cerebro-Spinal Meningitis, J. T. Marsh, Liberty.

18. Recent Improvements and Discoveries in the Science of Alimentation, O. P. Kernodle, Sedalia.

19. Diphtheria, P. S. Fulkerson, Sedalia.

Discussion on Nos. 16, 17, 18 and 19 opened by H. C. Shuttee, West Plains; J. F. Campbell, Callao; L. J. Jones, Linden.

20. Syphilitic Sciatica, J. K. Bauduy, St. Louis.

21. Two Cases of Chancre of the roin. A. H. Ohmann-Dumesnil, St. Louis.

22. Some Observations of Secondary Syphilis, Wm. Frick, Kansas City.

23. Nature of Some Epidermic Growths and their Treatment with Formalin, M. F. Engman, St. Louis.

24. Presentation of a New Ureter Cystoscope, Bransford Lewis, St. Louis.

Discussion on Nos. 20, 21, 22, 23 and 24 opened by Joseph Grindon, St. Louis.

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Evening Session, May 15th.

25. Report on State Medicine, E. L. Priest, Nevada.

26. The Status of the Medical Profession, Present and Future, L. Bremer, St. Louis.

27. Small-Pox; Its Prevention and Treatment, R. S. Kelso, Joplin.

28. Report on Medical Education, J. M. Allen, Liberty.

29. Quackery vs. Medical Ethics, C. R. Day, Mayview.

Discussion on Nos. 25, 26, 27, 28 and 29 opened by J. M. Allen, Liberty, and W. S. Allee, Olean.

Morning Sessioon, May 16th.

30. Report on the Progress of Surgery, W. A. McCandless, St. Louis.

31. Old Sinuses, H. E. Pearse, Kansas City.

32. What is the Value of Trauma as an Etiologic Factor in Chronic Tubercular Disease, G. R. Highsmith, Carrollton.

33. Carcinoma of the Cecum in a Young Adult, T. C. Witherspoon, St. Louis.

Discussion on Nos. 30, 31, 32 and 33 opened by W. P. King, Kansas City.

34. Symposium on Gall Stones—Physiology of the Bile, C. Shattinger, St. Louis; Pathology of the Gall Stones, H. Summa, St. Louis; Etiology and Diagnosis, W. G. Moore, St. Louis; Medical Treatment, C. F. Wainwright, Kansas City; Surgical Treatment, A. V. L. Brokaw, St. Louis.

Discussion opened by P. Y. Tupper, St. Louis.

Afternoon Session, May 16th.

35. Report on Abdominal Surgery, F. J. Lutz, St. Louis.

36. Radical Treatment of Hernia by the Marcy-Bassini Operation, five cases, C. H. Wallace, St. Joseph.

37. Intra-Mural Fibroid of the Uterus; Removal During the Fifth Month of Gestation; A Normal Parturition; Mother and Child Doing Well; E. R. Lewis, Kansas City.

Discussion on 35, 36 and 37 opened by R. M. Funkhouser, St. Louis.

38. Appendicitis; When and How to Operate, A. H. Meisenbach, St. Louis.

39. Opium in Appendicitis, H. A. Geitz, St. Louis.

Discussion on 38, 39 and 40 opened by J. Y. Brown, St. Louis; A. R. Kieffer, St. Louis.

Evening Session, May 16th.

41. President's Address, W. B. Dorsett, St. Louis.

42. Report on Gynecology, H. C. Crowell, Kansas City.

43. Vesico-Vaginal Fistulae, T. E. Potter, St. Joseph.

44. Uterine Carcinoma, M. B. Ward, Kansas City.

45. The General Practitioner and the Gynecologist, F. A. Glasgow, St. Louis.

Discussion on Nos. 41, 42, 43, 44 and 45 opened by Y. H. Bond, St. Louis; C. Lester Hall, Kansas City.

46. Acute Inversion of the Uterus, J. C. Crist, Lexington.

47. Are Obstetrical Emergencies Fully Anticipated, C. A. Dannaker, Kansas City.

Discussion on Nos. 46 and 47 opened by J. H. Van Eman, Kansas City; O. B. Campbell, St. Joseph.

Morning Sessioon, May 17th.

48. Report on Neurology, C. R. Woodson, St. Joseph.

49. The State's Greatest Crime, E. Van Note, Kansas City.

50. Hystero-Epilepsy, E. E. Parrish, Memphis.

51. Hysteria and Its Protean Manifestations, John Punton, Kansas City.

52. Shall the Specialist Pay a Commission to the General Practitioner? Emory Lanphear, St. Louis.

After an attack of the grip the patient finds himself in a state of extreme weakness and prostration from which condition he is tediously brought to his former good health. Remedies which stimulate his exhausted nerves too vigorously do so at the expense of his general condition. Then comes the relapse. Syr. Hypophos. Comp. McArthur conveys to the tissues the revivifying and vitalizing agent phosphorous in its most oxidizable and assimilable form. Thus the true vitality of the nerve structure is restored by renewing the nutrition of the tissues themselves.

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PROGRAM ILLINOIS STATE MEDICAL SOCIETY.

Springfield, Ill., May 15-17, 1900.

SECTION ONE.

Practice of Medicine, Medical Specialties, Materia Medica and Therapeutics.

Chairman...H. C. Mitchell, Carbondale
Secretary...Charles D. Center, Quincy

Address—A. C. Corr, Carlinville.—"Medicine, or Surgery; Are They Separable? If Not, Which is the Science, Which the Specialty?"

1. Chronic Gastritis, Jas. Brayshaw, Berlin.
2. Chorea, with Report of a Case, D. M. Knapp, Mendon.
3. Myxedema, with Report of Cases, Frank Billings, Chicago.
4. Our Milk Supply; Some Observations at Home and Abroad, S. E. Munson, Springfield.
5. Typhoid Fever in Southern Illinois, Ford S. Dodds, Anna.
6. Nephritis, with Report of Three Cases, J. W. Kelly, Springfield.
7. Concerning the Simulation of Abdominal Diseases by Pleurisy, Jas. B. Herrick, Chicago.
8. Is Pneumonia Contagious, J. T. McAnally, Carbondale.
9. Pneumonia and its Treatment, J. N. Black, Clayton.
10. On the Evils Resulting from the Naming of Diseases for Individuals, N. S. Davis, Sr., Chicago.
11. Diagnosis of Tumors of the Spinal Cord and its Membranes, F. P. Norbury, Jacksonville.
12. Cerebral Palsies of Childhood, J. C. Gill, Chicago.
13. Every Day Headaches, Hugh T. Patrick, Chicago.
14. Nature and Treatment of Locomotor Ataxia, Albert Wing, Chicago.
15. California as a Health Resort, John H. Hollister, Chicago.
16. Have we got the Small-Pox, H. C. Mitchell, Carbondale.
17. A New Treatment of the Opium Habit, Archibald Church, Chicago.
18. Complications and Sequelae of Scarlet Fever, M. S. Marcy, Peoria.
19. Middle Ear Massage, James B. Taylor, Bloomington.
20. Rheumatic Diseases of the Eye, H. W. Woodruff, Joliet.
21. The Imhibition of Water in Relation to Some Forms of Disease, W. F. Moffet, Williamsville.
22. Principles of Immunity, W. J. Fernald, Rantoul.
23. Chronic Diarrhoea in the Aged, W. L. Irwin, Plymouth.
24. Chylous Ascites; Report of Cases, R. J. Christie, Jr., Quincy.
25. Anaesthetics, W. H. Maley, Galesburg.
26. Anomolies and Monstrosities, J. N. Nelms, Taylorville.
27. Sepsis, Francis Reder, St. Louis, Mo.
28. Small-pox; Its Differential Diagnosis, J. C. Sullivan, Cairo.
29. The Increase of Paresis, Samuel Dodds, Anna.
30. Leukaemia and Pseudo-splenic Leukaemia, E. J. Brown, Decatur.

SECTION TWO.

Surgery, Surgical Specialties and Obstetrics.

Chairman.....Denslow Lewis, Chicago
Secretary....Carl E. Black, Jacksonville

Obstetric Symposium.

Address—J. Clarence Webster, Chicago—"The Pathology of Delivery."

(a) The Application of the Forceps, J. E. Allaben, Rockford.
(b) The Technique of Version, J. F. Percy, Galesburg.
(c) The Management of Impacted Cases, Henry F. Lewis, Chicago.
(d) The Mutilating Operations, C. S. Bacon, Chicago.
(e) Symphyseotomy, G. N. Kreider, Springfield.
(f) Caesarean Section and Porro Operations, C. B. Reed, Chicago.

1. The Treatment of Appendicitis by Perineal Incision in Males and Vaginal Incision in Females, E. M. Sutton, Peoria.
2. (a) Some Interesting Details Regarding Septic Diseases of Women, F. Henrotin, Chicago. (b) Intestinal Obstruction after Vaginal Hysterectomy and Pelvic Abscess, A. Goldspohn, Chicago.
3. The Treatment of Ankle Sprains, E. H. Ochsner, Chicago.
4. Gall Stones, J. W. Hairgrove, Jacksonville.
5. Sterility in Men, Emil Reis, Chicago.

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6. The Ambulatory Treatment of Fractures, E. H. Lee, Chicago.

7. Congenital Dislocation of the Hip, John Ridlon, Chicago.

8. Surgical Introspection, H. W. Chapman, Whitehall.

9. Ptosis of the Liver, A. I. Bouffleur, Chicago.

10. Causations of Septic Conditions following Surgical Operations,. Waldo Fisher, Alton.

11. A Gynaecological Examination, C. C. Hunt, Dixon.

12. The Present Treatment of Syphilis, Wm. Allen Pusey, Chicago.

13. Acute Hemorrhagic Encephalitis, C. Dewey Center, Quincy.

14. Operative Technique of Very Large Inguinal Herniae, M. L. Harris, Chicago.

15. The Use of Pedicle Flaps for Plastic Surgery of the Hand and Arm, W. E. Schroeder, Chicago.

16. The Aseptic Conduct of Labor, J. B. De Lee, Chicago.

17. Renal Calculi, R. A. Kerr, Peoria.

18. Early Nephrotomy, A. H. Ferguson, Chicago.

19. The Treatment of Prostatic Enlargement, with Special Reference to Bottini's Operation, F. Kreissl, Chicago.

20. Hysterectomy for Infection Following Labor, Carl Wagner, Chicago.

21. The Diagnosis and Treatment of Adenoids, E. S. Dickerman, Chicago.

22. Sympathetic Ophthalmia, A. L. Adams, Jacksonville.

23. Syphilis of the Eye, W. H. Wilder, Chicago.

24. Gonorrhoeal Conjunctivitis, A. T. Haight, Chicago.

25. Chronic Inflammation of the Tear Passages, W. O. Nance, Chicago.

Symposium on Rectal Diseases.

(The Symposium on Rectal Diseases will be the special order of business for Thursday morning.)

(a) The Diagnosis of Diseases of the Rectum, J. Rawson Pennington, Chicago.

(b) The Pathology and Treatment of Fistula in Ano, A. E. Halstead, Chicago.

(c) The Treatment of Prolapse of the Rectum, Weller Van Hook, Chicago.

(d) The Treatment of Haemorrhoids, N. H. Henderson, Chicago.

L. Blake Baldwin, of Chicago, will exhibit Stereopticon Views of color photography of Skin Diseases in the Sunday School Room of the First Methodist Church, Wednesday, May 16, at 5:30 p. m.

SECTION THREE.

Etiology, Hygiene, State Medicine and Medical Jurisprudence.

Chairman....George F. Butler, Chicago
Secretary....W. J. Fernald, Rantoul

Address—A. C. Cotton, Chicago—"Jeremiah xxxi.-15."

1. Obstruction in the Pathway of Legitimate Medicine, J. H. Miller, Pana.

2. The Relation of the State to the Dependent, J. B. Maxwell, Mt. Carmel.

3. The Criminal and His Kin; How Can We Decrease Their Numbers? G. S. Bower, Galesburg.

4. Mental Overwork and Lack of Interest in Physical Development of and Hygienic Care of School Children, a Menace to the Future of the Race. E. A. Edlen, Moline.

5. The Scientific Need of Legislation Enforcing County Registration of Syphilitics, James E. Coleman, Canton.

6. Syphilis in Relation to the Dental Profession, L. Blake Baldwin, Chicago.

7. A Further Consideration of State Medicine and Sanitation, A .C. Corr, East St. Louis.

8. The State Care of Consumptives, John A. Robison, Chicago.

9. The Epileptic Colony, D. R. Brower, Chicago.

10. Sanitarium Treatment of Pulmonary Tuberculosis in Illinois, Florence Hunt, Chicago.

11. Observations as to the Efficiency of the Chicago Health Department Method of Fumigation, Adolph Gehrman, Chicago.

12. The Relation of the Physician to the Public School, Katharine Miller, Lincoln.

13. Medico-Legal Status of Abortion. O. B. Will, Peoria.

14. If the Cause is Removed, the Cure Will Follow, W. J. Chenoweth, Decatur.

15. What Shall the Harvest Be? R. H. Henry, Peotone.

16. Slight Ailments, L. L. Leeds, Lincoln.

17. The Elimination Function of the Kidneys in Health and Disease, J. Palmer Matthews, Carlinville.

18. Practical Observations on the Chemical Effects of a Few of the Older and Some of the Newer Remedies, E. L. Rerriott, Jacksonville.

19. Preventive Medicine and the Higher Medical Education, E. B. Montgomery, Quincy.

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Fortnightlettes

ST. LOUIS MEDICAL DIRECTORY.—Physicians who failed to get a copy of the latest medical directory of St. Louis, may obtain a copy at the FORTNIGHTLY office. Price $1.00.

LONGEVITY.—Servia takes the palm for longevity. It is said to have the greatest number of centenarians. There are 575 of them in a population less than 1,300,000 inhabitants. Iceland has 578, Spain 401, England and Scotland and Wales only 192, Germany 78, Norway 23, Sweden 20, Denmark only 2, Switzerland none.

AN ADVANTAGEOUS OFFER.—In this issue will be found an extraordinary offer to physicians. On page 6 Messrs. Huston Bros., the reliable instrument house of Chicago, make an introductory offer to the readers of the FORTNIGHTLY, which will pay any one to investigate. The goods sold by this house are strictly first-class, and any statements made by it may be relied upon.

PATHOLOGIC SPECIMENS DESIRED.—Dr. Hugo Summa has been appointed to arrange the individual exhibit of the state in the pathologic section at the Atlantic City meeting of the American Medical Association, Missouri being allowed an exhibit of not more than one hundred specimens. Dr. Summa requests the members of the profession of the state to inform him of their willingness to loan rare or important specimens for this purpose. Each specimen should be plainly labeled, with the diagnosis of the lesion, the contributor's full name and address and the number corresponding with the accompanying case history. Professor Summa will be glad to furnish any particulars that may be desired. His address is 2249 St. Louis Avenue, St. Louis.

PARIS AND THE MIDNIGHT SUN.—The following card, which appeared in the *Journal of the American Medical Association,* will be read with interest by members of the Association who intend crossing the Atlantic to be present at the Thirtieth International Medical Congress:

WAR DEPARTMENT, SURGEON-GENERAL'S OFFICE,
WASHINGTON, D. C, April 13, 1900.

HENRY GAZE & SONS, 113 Broadway, New York, N. Y.

Gentlemen:—I have received your circular headed "Paris and the Midnight Sun," and stating that a committee has been organized to arrange for this trip. Will you kindly inform me by what authority my name has been included among the members of this committee? I have no knowledge of my appointment upon such a committee, or of such a committee having met to consider the matter referred to, and I have no intention of making the trip which you advertise.

Very truly yours,
GEO. M. STERNBERG, Surgeon-General, U. S. Army.

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The Medical Fortnightly.

Issued Tenth and Twenty-fifth of Every Month by the Fortnightly Press Co.

UNDER THE EDITORIAL DIRECTION OF

FRANK PARSONS NORBURY, M. D. AND THOS. A. HOPKINS, M. D.

Secretary: CHARLES WOOD FASSETT, M. D.

A COSMOPOLITAN BIWEEKLY FOR THE GENERAL PRACTITIONER

Editorial Offices in St. Louis, Chicago, Cincinnati, Jacksonville, St. Joseph, Kansas City, and Pueblo, where specimen copies may be obtained and subscriptions will be taken.

Address all business communications to the Fortnightly Press Company.

Address all contributions and books for review to the Editors, Suite 312, Century Building, Saint Louis.

Paris: U. S. Press Building, Espanade des Invalides, Paris Exposition.

Volume XVII MAY TWENTY-FIFTH Number 10

Editorial Department.

The Last Words of Meiamoun.

To a lover of the exquisite in literature there is nothing more beautiful than that which was given the literary world by Theophile Gautier, and we could wish that he had written more voluminously. Whether or not his writings are obscene depends on the breadth of view of the reader. It seems to us that the seeker after the questionable would hardly look for it in such artistic gems. However this may be, Dr. C. A. L. Reed, following the style of Gautier, wrote under the above title. His prose-poem is so like those of Gautier that had it been published in connection with "One of Cleopatra's Nights," it would have been considered a part of the original. This was published in the *Medical Mirror* of June, 1899. The sequel comes on the 15th of May, 1900, when the postal authorities called on Dr. Love to convince them that it was mailable matter. There is doubtless medical politics behind the complaint, and it is reasonably certain that the right of the medical press to liberty beyond that granted to journals destined for the perusal of children, will be demonstrated. The question distinctly concerns every medical journalist. None of us wishes to cater to hunters for obscenity, or to devote our pages to what is questionable, but we do wish that the intelligence and standing of our readers and contributors be considered, and that we be judged on that basis. The claim that a medical journal may publish only scientific matter is also to be met at this time, and the decision in Dr. Love's case will determine the opinion of the department on the question. It should be the personal business of every medical journalist that this feature of the question be answered decisively, that all sides of the physician's intellectual life may be served through this medium. T. A. H.

THE engagement of Miss Anna Caplan and Dr. M. R. Horwitz is announced. Miss Caplan is a sister of Dr. Leo Caplan.

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THE following from the *St Louis Republic*, of May 16th, is worthy of all the publicity which may be given it. It is evident Uncle Sam does not agree with our State officials, who have legalized Weltmerism, but he does agree with the intelligence of this and every other community:

Uncle Sam after Weltermerism.

"Washington, May 15.—The Post Office Department has issued an order forbidding the delivery of mail matter and the payment of money orders to the American School of Magnetic Healing, the order reading that S. A. Weltmer, president; J. H. Kelly, secretary, all of Nevada, Mo., are conducting through the mails a scheme for obtaining money by means of false and fraudulent pretenses. The official order states:

"The evidence before the department showed that the 'absent treatment' scheme for disease and poverty, while predicated upon the proposition of S. A. Weltmer, was not conducted by himself, but by the business managers of the scheme. The persons making remittances for treatment of any disease by the absent method were notified that they must assume a passive attitude at certain hours of the day, and at these hours Professor Weltmer's 'healing thought' would flow out to them. In reality, Professor Weltmer was not in any wise brought in contact with the patient or with his correspondents, and knew practically nothing of the business operations of the scheme."

"Nevada, Mo., May 15.—L. L. Scott, attorney for the American School of Magnetic Healing, who went to Washington to argue before the Postmaster General the claim of the institute to the mail matter held in the Nevada postoffice by order of the department, returned today. The following order was received:

"'Permanent order has been issued, forbidding delivery of mail matter and payment of money orders addressed to American School of Magnetic Healing, for conducting through the mails a scheme to defraud. Definite instructions as to return of mail to senders will follow. Mail addressed to S. A. Weltmer personally may be delivered to him. Action of department does not deal with Weltmer proposition, but manner in which absent treatment scheme was conducted. Letter follows.

"HARRISON K. BARRETT,

"'Acting Assistant Attorney General for Post Office Department.'"

J MCDONALD, JR., general manager of the *International Journal of Surgery*, spent a few days in St. Louis recently. Mac. reports that the "*International*" is booming in all its departments.

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IT IS with sincere regret that we announce the death of one of our esteemed collaborators, Dr. Landon Carter Gray, who died at his home in New York City, May 8, aged 50 years. He studied in Columbia and Heidelberg universities, and in 1873 took his degree in medicine at Bellevue Hospital Medical College. He began practice in New York City, but afterward moved to Brooklyn, where he was made professor of neurology at the Long Island Hospital and visiting neurologist to St. Mary's Hospital. He was one of the founders of the New York Polyclinic, and was its professor of mental and nervous diseases. He served as president of the American Neurological Association, the New York Neurological Society, and the Society of Medical Jurisprudence. He was also chairman of the executive committee of the American Congress of Physicians for three successive sessions, and the author of several medical works, among the most important of which is his text-book on nervous and mental diseases.

MISSOURI STATE MEDICAL ASSOCIATION.—A pleasant and profitable meeting of this Society was held in Mexico, on the 15th, 16th and 17th of May, and the program published in our last issue was carried out. Our next number will contain a report of the proceedings. Following is a list of the officers elected:

President—Dr. U. S. Wright, Fayette.
First Vice-President—D. C. Gove, Marshall.
Second Vice-President—J. R. Fritts, Mexico.
Third Vice-President—R. S. Kelso, Joplin.
Fourth Vice-President—Thomas Chowning, Hannibal.
Fifth Vice-President—F. E. Murphy, Kansas City.
Recording Secretary—B. C. Hyde, Kansas City.
Asistant Recording Secretary—W. A. Bracklein, Higginsville.
Corresponding Secretary—C. R. Dudley, St. Louis.
Treasurer—J. F. Welch, Salisbury.

The next meeting will be held in Jefferson City.

A PHASE OF A. M. A. POLITICS.—One of our advertisers calls our attention to the telegram which we reproduce below, and which has been sent to all important American manufacturers. We deeply deplore that the methods of the ward politician should even appear to have crept into the Association. The Section on Materia Medica is in no sense an advertising agency, and must be kept clear of any suspicion of favoring any manufacturer to the detriment of others who are equally meritorious; in fact the Section has only to deal with the question of purity and reliability of medicines, their geographical past should "cut no ice." We reproduce the telegram as it was sent to us: "We learn from good authority that the foreign chemical houses will attempt to elect their allies as chairmen and members of Section on Materia Medica of the American Medical Association at the Atlantic City meeting. Many good men are with them, without realizing the underhanded scheme; which is to discard American products and endorse only the foreign. We should expose the plot with all possible haste by communicating with every medical journal in which we and other American houses carry advertisements, and ask their co-operation."

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The Reviewer's Table.

Books, Reprints, and Instruments for this department, should be sent to the Editors, St. Louis

A MANUAL OF THE PRACTICE OF MEDICINE. Prepared Especially for Students. By A. A. STEVENS, A. M., M. D., Professor of Pathology in the Woman's Medical College of Pennsylvania, etc. Fifth edition, revised and enlarged. Illustrated, 519 pp. Price, $2.00. Philadelphia: W. B. SAUNDERS.

A VERY serviceable manual for students. It is explicit, but concise; accurate in its description and in line with modern methods of practice. It is a working manual, and useful as such. As a desk manual for the busy practitioner it is also serviceable and can readily be consulted.

A MANUAL OF THE DIAGNOSIS AND TREATMENT OF THE DISEASES OF THE EYE. By EDWARD JACKSON, A. M., M. D., Emeritus Professor of Diseases of the Eye in the Philadelphia Polyclinic; formerly Chairman of Section on Ophthalmology of the American Medical Association. With 178 Illustrations and 2 Colored Plates. Philadelphia, W. B. SAUNDERS, 925 Walnut Street, 1900. Price, $2.50, net.

THIS manual of six hundred pages is intended to meet the needs of the general practitioner of medicine and the beginner in ophthalmology. The author has had great experience as a teacher, and lays great stress upon the recognition and management of the conditions likely to be presented early in practice, rather than to the rarer diseases that may come later. The style is clear and concise, the illustrations fresh, and many of them new and a bibliography at the end of each chapter will be of great assistance to the student. J. E. J.

DISEASES OF THE NOSE AND THROAT. By J. PRICE-BROWN, M. B., L. R. C. P. E., Member of the College of Physicians and Surgeons of Ontario; Laryngologist to the Protestants 'Orphans Home: Fellow of the American Laryngological, Rhinological and Otological Society; Member of the British Medical Association, the Pan-American Medical Congress, the Canadian Medical Association, the Ontario Medical Association, etc., etc. Illustrated with 159 Engravings, including 6 Full-Page Color Plates, and 9 Color cuts in the text, many of them original. 6¼ x 9¼ inches. Pages xvi.—470. Extra cloth, $3.50, net. THE F. A. DAVIS CO., Publishers, 1914-16 Cherry Street, Philadelphia.

THIS is an American book of Canadian authorship. The author has carefully considered the needs of the general practitioner; the discussion of the anatomy is brief, but clear; diagnosis, symptomatology are spoken of with an authority that is pleasing. Again, he has wisdom in limiting his book strictly to his specialty, nose and throat. His independence in expression and care of statement of facts at once indicate his scientific training and reliability as an observer. This book practically represents three monographs, viz., one on anatomy, one on diseases of the pharynx, and one on diseases of the larynx. It is especially valuable to the general practitioner, as the author did not limit his work to this field until he had twenty years' experience in general medicine, consequently he recognizes the needs of the family practitioner, for whom this book was primarily written. The specialist, too, will find in the book sound views and reliable practice of a fellow-practitioner. The book is printed with skill, many of the illustrations are in colors, and as a whole is well proportioned, well printed and well bound. F. P. N.

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THE constant increase of valuable medical literature in serial form, and the inability of physicians to review this mass as it appears, has made necessary the year-book of progress. Saunders inaugurated several years ago the American Year-Book, and it immediately met with a hearty welcome by the profession. It has grown in usefulness from year to year, until now it is deservingly the most popular work of its kind. By reason of the quantity of material under review it has become necessary to issue the work in two volumes, dividing it to the best advantage for the physician's use under the two headings, "Medicine" and "Surgery." The subjects considered in the volumes are as follows: Medicine.—General medicine, pediatrics, pathology, nervous and mental diseases; materia medica, physiology, legal medicine, hygiene and chemistry. Surgery.—General surgery, obstetrics, gynecology, orthopedic surgery, ophthalmology, otology, laryngology, rhinology, anatomy, etc. We have carefully reviewed these volumes; they are useful working epitomies of progress, and every physician needs them to aid him in his daily practice.

THE AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY. Edited by GEO. M. GOULD, A. M., M. D., Assisted by Eminent American Physicians and Teachers. W. B. SAUNDERS, Publisher, Philadelphia, 1900. Published in two volumes. Price, $3.00 per volume.

F. P. N.

INTERNAL MEDICINE has a philosophy of its own. It is not founded on empirical conception, but from deductions emanating from a premise founded upon scientific principle. Bruce has in this thoroughly enjoyable and decidedly original book, outlined the principles of treatment as determined by practical, philosophical reasoning. The principles of the science of medicine are here stated, while their application (the art of medicine) is outlined in excellent form. After reading this book one is impressed with the intelligent foresight, the thoroughness of his modern medical research and the broad intellectual training of its author. The author's plan of considering disease is an inspiration; it gives to the tyro in medicine methods for work; it teaches the practitioner in the harness to be more careful, more intellectual and less haphazard in his therapeutics. Indeed, this book has been to the reviewer, a treat, a feast of reason and an inspiration. The young man in medicine should have this book on his table, and let it be his daily companion until he sees crystalizing in his own methods of practice the high ideals which Bruce inspires. The precepts of this book, if mastered and followed, would be the consummation of the ideal, viz., physicians familiar with disease in all of its details, and a broad, intelligent knowledge of therapeutics. Every physician will profit by reading this book, it conveys medical knowledge toward its end, viz., the treatment of disease. It is one of the best books of the year.

THE PRINCIPLES OF TREATMENT AND THEIR APPLICATION TO THE PRACTICE OF MEDICINE. By J. MITCHELL BRUCE, M. D., F. R. C. P., Lecturer on the Practice of Medicine in Charing-Cross Hospital, London; Examiner in Medicine, Royal College of Physicians, London. Revised to conform with the U. S. Pharmacopoeia by E. Q. THORNTON, M. D., Jefferson Medical College, Philadelphia. In one octavo volume of 625 pages. Cloth, $3.75, net. Philadelphia and New York: LEA BROTHERS & CO.

F. P. N.

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THE exhaustion of the very first edition of this standard work shows how well it has met the needs of students and practitioners, and its eminent author has fully utilized the opportunity thus offered by subjecting his book to a most thorough and searching revision. Many chapters have been entirely rewritten, new ones have been added, and every page has been revised in order to present the most recent achievements in the entire field of surgery. Everywhere will be found the closest attention to modern pathology and asepsis. In short, the volume will be found a clear, concise, comprehensive and practical presentation of the most modern surgery, thus fully justifying its title. The rich series of illustrations has been revised with equal care, and the student or practitioner will not find a more satisfactory or valuable single volume work on this subject.

THE PRINCIPLES AND PRACTICE OF MODERN SURGERY. For the use of Students and Practitioners of Medicine and Surgery. By JOHN B. ROBERTS, M. D., Professor of Anatomy and Surgery in the Philadelphia Polyclinic; Mutter Lecturer on Surgical Pathology of the College of Physicians of Philadelphia. New (2d) and revised edition. In one very handsome octavo volume of 838 pages, with 474 engravings and 8 plates in colors and monochrome. Cloth, $4.25, net; leather, $5.25, net. Philadelphia and New York: LEA BROTHERS & CO.

ONE must read this excellent book to appreciate its true merit. The articles taken from the writings of the fearless and talented author as they have appeared in various publications are here compiled in book form. The character of the book is high, it is an expose of the humbuggery and quackish practices of the christian scientists, written in convincing style and calculated to give to a layman of ordinary judgment and sense, the true picture of this pernicious fad, which in the hands of Mrs. Eddy and her blind followers has caused such sad havoc in this day of supposed enlightenment. Christian science has its hold among the hysterical, the shallow intellects and poor, senseless fools who follow everything that has about it the air of mysticism. If he who runs will read Purrington there will be instilled some sense, and for this reason this book should be circulated among the laity; be in public libraries, and even in the Sunday school libraries, because christian science is undermining true religion as well as true science in its pernicious foolishness. Children should not be allowed to become the innocent followers of this blatant hollow mockery, and any measure which will teach them to reason for themselves should be encouraged. This book should be read and digested by layman and physician. It is timely, useful and will do great good. F. P. N.

CHRISTIAN SCIENCE. An Exposition of Mrs. Eddy's Wonderful Discovery, Including its Legal Aspects. A Plea for Children and Other Helpless Sick. By WILLIAM A. PURRINGTON, Lecturer in the University and Zellerne Hospital Medical College, and in the New York College of Dentistry upon Law in Relation to Medical Practice, etc. New York, E. B. TREAT & CO., 1900. Price, $1.00.

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GOULD'S dictionaries have had unprecedented sales. One hundred thousand copies, coincident with this edition. The features of this special edition are the remarkable amount of literary material contained between its covers 30,000 words are defined; the method of binding and printing, and above all, its price, $1.00. It is certainly a very cheap book, and one which students and physicians will greatly appreciate. F. P. N.

A POCKET MEDICAL DICTIONARY, Etc., Etc. By GEORGE M. GOULD, A. M., M. D. Fourth Edition. Revised and Enlarged. 835 pages. Flexible Leather, Gilt Edges, Round Corners. P. BLAKISTON'S SON & CO., Publishers, Philadelphia, 1900. Price, $1.00.

AMONG THE MAGAZINES.

ST. NICHOLAS.—Governor Roosevelt's familiar face and figure form the frontispiece of *St. Nicholas* for May, the first article therein being from his pen—"What We can Expect of the American Boy." In this essay Col. Roosevelt distinguishes between moral and physical courage, and maintains that both forms are necessary to a complete and rounded character. Incidentally he praises Kipling's "Captains Courageous." In "Daub-o-Links" Charles Love Benjamin describes a novelty in artistic amusements; and in "The Enchanted Adjutant Bird" Tudor Jenks tells a fairy-story of a bird that had the good sense to refuse to be turned into a man. "A Little American Girl at Court," by Louise Bradford Barnum, is a tale of a truant who was not lost, as her family thought, but was hobnobbing with a German King. *St. Nicholas* abounds in verses and pictures, and its departments of Nature and Reading are full to the brim.

BEST AGE FOR MEN TO MARRY.—Edward Bok, writing in the May Ladies' Home Journal, on "A Boy for a Husband," contends that "no young man under twenty-five years of age is in any sense competent to to take unto himself a wife. Before that time he is simply a boy who has absolutely nothing which he can offer to a girl as a safe foundation for life happiness. He is unformed in his character, unsettled in his ideas, absolutely ignorant of the first essentials of what consideration or love for a woman means. He dosen't know himself, let alone knowing a woman. He is full of fancies, and it is his boyish nature to flit from one fancy to another. He is incapable of the affection on which love is based, because he has not lived long enough to know what the feeling or even the word means. He is full of theories, each one of which, when he comes to put it into practice will fail. He is a boy, pure and simple, passing through that trying period through which every boy must pass before he becomes a man. But that period is not the marrying time. For as his opinions of life are to change, so are his fancies of the girl he esteems as the only girl in the world to make him happy. The man of thirty rarely weds the girl whom he fancied when he was twenty."

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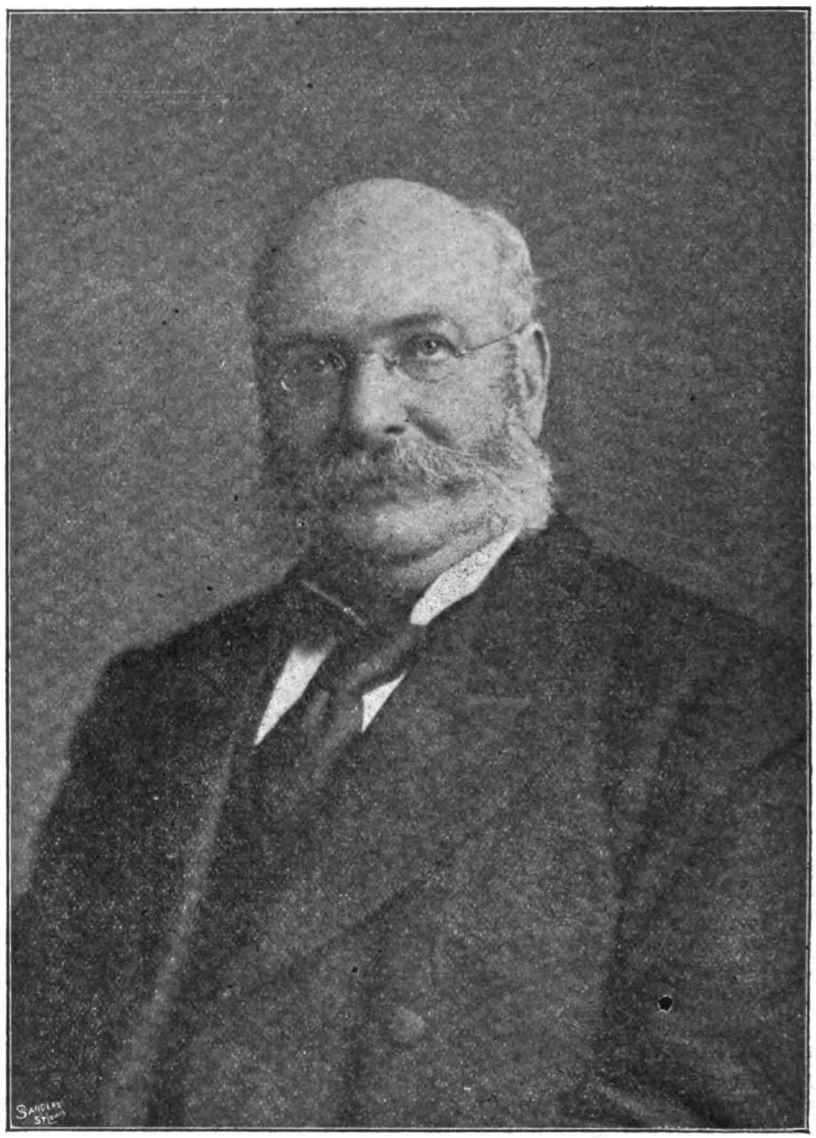

MR. REGINALD HARRISON, F. R. C. S.
LONDON, ENGLAND.

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Original Department.

PAPERS for the Original department should be in hand one month in advance, and contributed to THE MEDICAL FORTNIGHTLY exclusively. A liberal number of extra copies will be furnished authors, and reprints may be obtained at reasonable rates, if request accompanies the manuscript. Engravings from photographs furnished free.

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☞ Signature of contributor, for reproduction, should be sent with every article, on a separate slip; use heavy ink, and allow autograph to dry without applying blotter.

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Remarks on Vasectomy Relative to Enlarged Prostate and Bladder Atony.

BY REGINALD HARRISON, F. R. C. S.,

LONDON,

Surgeon to St. Peter's Hospital.

IN a recent article I ventured to state that "if vasectomy and castration in relation to prostatic hypertrophy had done no more than direct attention again to its pathology they would have served a useful purpose," and I then took the opportunity of illustrating some varieties in shape and structure that were included in this term. Hence I urged that it was about as rsasonable to expect to find a uniform treatment for it as it would be in the case of what "enlarged breast" might be made to express. The mass of material which the student of morbid anatomy has now within his reach calls from time to time for its application to the purposes of classification and treatment. In no department of work is this more necessary than in the case of the urinary organs from whatever portion of the entire apparatus it is viewed.

It has been extremely interesting to follow the various communications that have been made during the last few years relative to the employment of vasectomy and castration in the treatment of prostatic hypertrophy.

In some cases the results have been admirable, in others doubtful, whilst between these two extreme there have been various gradations.

In my own practice since my advocacy of vasectomy in 1893, I have performed the operation in over 100 cases, and I can say that whatever effects were exercised upon the prostate I have never seen any harm result

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or heard of any regret expressed from what followed other than that arising in a few instances, from failure to obtain, by comparison, all the good that might have been anticipated. A number of these case have now been under observation, or cognizance, for from one to seven years, so that ample opportunity has been permitted for noting what happened during considerable intervals after operation. I have already referred to a previous communication, in which stress was laid on the fact that there were structural conditions of the prostate when enlarged where shrinkage was unlikely to happen after either castration or vasectomy, as illustrated by carcinomatous, fibrotic and adenomatous glands. These all simulate the commoner form of prostatic hypertrophy, and though vasectomy does no harm it is rarely followed in these instances by appreciable good.

The present communication has for its main object the demonstration of the existence of certain physical changes in the bladder arising out of chronic prostatic obstruction, which are sufficient to negative or minimize the effects that would otherwise follow the induction of shrinkage of the prostate by such means as under consideration.

This point presents itself in three ways: (1) From the examination after death of persons who had undergone vasectomy or castration for hypertrophied prostate. (2) From the exploration of the interior of the bladder by suprapubic cystotomy under similar circumstances; and (3) From the examination of collected specimens illustrating various kinds of atonic bladders in persons who had been more or less dependent on the catheter with enlarged prostates.

Of the first mentioned I have met with two examples and of the second four. In five of these vasectomy had been practised, and in one castration some months previously in every case. In none of them was death caused, or the operation of cystotomy necessitated by the vasectomy or castration, these events being brought about by independent derangements of the kidney or the bladder, which arose out of the original state of chronic prostatic obstruction. All instances showed evidence of varying but marked degree of prostatic shrinkage, though the complications mentioned were uninfluenced. All had benefited to some extent from the shrinkage of the gland which had thus been artificially induced, though the improvement was chiefly confined to matters relating to catheterism and washing out the bladder, but none of these six had resulted in the restoration of the natural function of micturition, or of catheter independence. The examination of the third group, which included a considerable number of atonic bladders associated with enlarged prostrate removed after death from patients who had been more or less dependent on the catheter for long periods of time, indicated the nature of the commoner lesions met with in the bladder under the latter circumstances.

From one or other of these sources I was able to demonstrate (1) That the usual effect of vasectomy is to induce shrinkage of the hypertrophied prostate. (2) That though this shrinkage affords a readier access to the bladder for catheters and such like purposes it did not necessarily follow that voluntary and natural micturition was thereby restored, failure in this respect being mostly due to structural changes in the bladder itself arising

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out of long continued obstruction. (3) That the latter consist of certain kinds and degrees of sacculation, pouching and trabeculation of the bladder, whereby its voluntary expulsive power is permanently and frequently irrecoverably damaged.

That the usual effects of vasectomy on the enlarged prostate is to bring about in the course of time its shrinkage or atrophy is, I think, generally admitted. Further, it would seem that if the prostatic shrinkage thus induced is not followed by the cessation or improvement of the symptoms characteristic of prostatic obstruction, and which includes the return of natural micturition it may be assumed that either the gland itself is at fault in other ways, as indicated in my previous paper, or that the bladder is now solely responsible for the failure.

The examination of the cases and specimens referred to previously in the three groups indicate that by far the commonest cause of bladder failure under these circumstances does not necessarily arise out of deterioration or loss of muscular substance requisite for urine expulsion, but is largely due to altered relationships between the mucous and muscular investments of the viscus. Take for instance as illustrations of the latter, the sacculated. pouched, trabeculated and herniated mucous coat bladders, which are the common results of protracted urine obstruction. The power is there, but it is misdirected. The mode in which a comparatively small sac in the bladder is capable of throwing the whole muscle "out of gear," to use a very apt term, is capable of demonstration in various ways.

Some years ago I saw a gentleman under fifty years of age without any stricture or prostatic obstruction who had met with an accident whilst hunting, and was partially thrown from his seat, when there was reason for believing that he had a distended bladder. He experienced some pain in the region of the bladder immediately, but was thought at the time not to be seriously hurt. Some weeks after I was consulted for smelling and foul urine, and for difficulty in emptying his bladder, for which, since the accident, a catheter was necessary. Eventually he became entirely dependent on the latter, and died in the course of a few months with chronic cystitis. A herniated pouch of mucous membrane just above the trigone which would admit the last joint of the thumb revealed the primary cause of his illness from his accident to his death. There was no evidence during life or after death of spinal injury. It was clear that this protrusion of a pouch of mucous membrane through the meshes of the muscular had brought the natural function of the bladder somewhat abruptly in an irreparable end.

Again, from time to time I see a man aged fifty, from whom I removed a single urate stone about the size of a small walnut, situated or imbedded in a pouch just within the posterior wall of his bladder. The operation consisted in seizing the stone (which could only be felt with the side of a sound) with the lithotrite, and putting it in a part of the bladder area, where it could readily be broken into fragments and removed with the wash-bottle and evacuator. The embedded condition of the stone had previously interfered with the patient's expulsive powers, and he was, before I saw him, largely dependent upon his catheter, though he had no large

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prostate to account for this. After the stone was removed from the sac, though he was completely relieved from pain and regained his general health he became entirely dependent upon his catheter, a circumstance which could only be explained by the structural alteration the bladder had thus undergone, and which at his age is not likely to be remedied. I have had more than one instance of this, and have recently reported two cases* where I had endeavored to deal directly with sacs complicating vesical stone, but with only partial and temporary success.

Further, I have met with several instances in young males suffering from chronic strictures of the urethra where the latter have been led as the consequence of straining to the formation of comparatively insignificant sacs in the bladder, which have so completely disarranged the expulsive mechanism of the viscus, as to render them dependent upon catheters, with not much chance of ever regaining complete voluntary power, even after the stricture has been successfully treated. Though it might at first sight seem a somewhat strained illustration to take it may be said, I believe that if the heart as the motor power of circulation were liable to undergo only a small portion of that structural damage, which is not infrequent in the bladder as a consequence of opposition to its action, the average duration of life would be much curtailed. There is not much to choose between the difficulty of repairing a heart-valve or a bladder wall structurally, as the case may be.

If these are some of the commoner effects of continued obstruction on the part of the prostate relative to micturition, they seem to suggest that that efforts might be directed to averting such consequences by bringing about artificially a shrinkage of the initial cause of obstruction at an earlier period than has hitherto been generally attempted. Some of the experience I have incidentally referred to before in this paper, and which is mainly derived from watching cases for several years, has an important bearing upon this point.

The best results of vasectomy have been met with in cases which may be said to have been on the border line of the development of those structural bladder changes which the continued use of a catheter does not tend to remove, and which renders the latter a necessary, though an inconvenient institution. In at least a dozen cases, what is known as catheter life, appears to have been permanently averted by vasectomy. These include persons who were prepared to take a reasonable chance of avoiding the probability of being dependent on the use of a catheter for the rest of their lives, as well as others whose condition or usual employment rendered the attainment of the object a particularly desirable one.

Latterly I have further simplified the process of breaking the continuity of the vasa by substituting torsion for section, through a small incision over the duct, with a pair of Spencer Wells forceps. In this way the vas is seized and bared, and a small portion of it is torsed out, no ligature being required. A suture for the skin-wound and a collodion application on gauze completes the dressing. A week or ten days interval between, in dealing with the two vasa, is advised.

* Two cases where multiple calculi were removed from large narrow-necked sacculi connected with the male urinary bladder. Med. Chir. Trans.. Vol. 82 (1899).

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So far as the function of the vasa is concerned, in contradistinction to what applies when castration is selected, I can only repeat with additional emphasis what I have already written† to the effect, that the latter extinguishes sexual power, whilst vasectomy does not necessarily appear to do so, though it eliminates the seminal ducts.

In conclusion, it may be deduced: (1) That vasectomy has been shown to be specially effectual in the earlier stages of prostatic enlargement in effecting shrinkage of the gland and the restoration of the natural process of micturition. (2) That in cases where there is evidence to show that the prostate has in the course of degeneration assumed the form and structure of a fibrous growth the conditions are such, provided the symptoms of obstruction warrant the adoption of other measures than catheterism, as to render some form of prostatectomy preferable to either vasectomy or castration. (3) That where as a consequence of sudden or protracted prostatic obstruction secondary changes have taken place in the bladder itself, in the form of sacs, pouches, or trabeculation, the posssibility of restoring its natural function by any means is extremely unlikely. Under such circumstances the induction of shrinkage of the enlarged gland will do good in affording a readier access for the catheter and in removing spasm, pain or hemorrhage connected with this or other similar process. I hope later on to illustrate the practice of vasectomy under the various conditions to which I have now referred, as viewed, at considerable periods after operation.

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Prophylaxis in Gynecology; Obstetrics.—(Edgar, *Medical News*, February 3, 1900.)—A large proportion of gynecological cases is caused by mismanagement of the obstetrician, and can be greatly reduced by careful practice. The subject may be considered under three heads: 1. In pregnancy careful attention should be given to constipation, anemia and the general hygienic condition of the patient. This will provide the patient with healthy blood and increase the muscular and general nutrition. A mixed diet in sufficient quantity is the best. 2. Labor should be limited in duration, and, if necessary, the forceps used in time to prevent maternal injury. If injury occurs it should be promptly repaired. Rigid attention should be given to asepsis and antisepsis. 3. In the puerperium the object should be to secure normal involution. The abdominal border should not be too tight. Rotation of the patient should be practiced. The bed-pan should be used, if possible. Lactation should be carefully watched, and the patient cautioned against getting up too soon. The author advises the use of a binder encircling the abdomen and supporting the pelvic floor by means of a strap passed between the thighs. Its use prevents sagging of the floor, assists the union of lacerations, preserves the figure, lessens the danger of displacements, and prevents congestion. During the latter part of pregnancy and through the puerperium strychnia is useful.

† Stone, Prostate and other Urinary Disorders. Churchill, 1899.

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Efficiency of Our Health Laws.

BY H. W. CHAPMAN, M. D.,

WHITEHALL, ILL.

Read at Jacksonville, April 12, 1900.

I SHALL open the consideration of this subject by quoting from an article in The Forum of February, 1899, by Dr. Wyman, Surgeon General of the United States Marine Hospital Service. He says: "Until 1893 there was, properly speaking, no national system of quarantine. All previous legislation had required only that assistance should be given State or local quarantines; and each state and locality had its own quarantine requirements, some good, some bad, some made strict enough to keep out disease, and others purposely weak, to attract, as it were, commerce to a more favoring port. At least half a dozen conventions were held by State authorities, both before and after the war of the rebellion, to bring about uniformity; but all efforts failed until congress enacted the law of 1893. This was a great advance in national quarantine, and under its provisions regulations have been promulgated. But the law requires a demonstration of inefficiency of management on the part of the local authorities, before the national government can assume control at a given port. This demonstration of inefficiency is precisely what should not be allowed. The law requires the Government to aid State and local authorities in the execution of their own regulations, which are sometimes unwise. It should require the local authorities to aid in the execution of the Government regulations.

In reference to an act amending this law, he says: "This bill provides also, that during yellow fever epidemics, the President may prohibit travel and traffic, except under safeguards imposed by national authority." It also, "grants authority for travel and traffic after application of the necessary sanitary measures."

Again, in speaking of foreign ports: "In times of danger, medical officers of the Marine Hospital Service are detailed to serve in the office of the consul to enforce the Govermental health regulations, and immigrants arriving on this side are by law required to be examined by the medical officers of the Marine Hospital Service to prevent their bringing contagious diseases."

The Marine Hospital thus constitutes a National Health Board, probably more efficient than any other, as its officers are more permanent.

The law establishing our State Board of Health briefly clothes it with plenary power to establish such rules and regulations as it may deem necessary from a sanitary point of view, and in case of epidemics, to establish an efficient quarantine; and clothes it with the power of the state to enforce these regulations.

Boards of Health of cities and villages are appointed and their duties prescribed by the city council, and the full power of the municipality is delegated to it to enforce its edicts.

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According to a recent decision of the Supreme Court of the State of Rhode Island, there can be no appeal from any requirements of a local Board of Health.

It also provides for the inspection of all public buildings and tenement houses in cities of 50,000 and over, as to construction, ventilation, air capacity and plumbing.

It will be seen that on the ability, judgment and integrity of the individuals composing these Boards of Health, depends the wisdom and beneficial character of the rules and regulations adopted, as well as the efficiency of their enforcement.

The efficiency of a good law is always dependent upon its enforcement. The rules and regulations established by such Boards can be amended, abolished, or allowed to lapse into inocuous deustude, at the pleasure of the creating power, thus giving an element of elasticity that should cause the highest amount of efficiency, without working the individval hardships of an inflexible statute.

As to who shall compose these Boards, the statute is silent, but in all cases it is safe to assume that they are the creatures of politics.

So far as my own observation enables me to judge, they are usually chosen from the members of the city council, and are almost invariably men of no knowledge of sanitary requirements. It is true that it sometimes happens that they have the idea that cleanliness is desirable, and fortunately this goes a great way. But some men's idea of cleanliness is governed entirely by their senses of sight and smell. If the source of offense is beyond reach in this manner, they assume it does not exist.

Now, the truth is, both these senses may be grossly offended without the slightest danger to health, and both may be carried around with great enjoyment in places of great danger to health.

In all of the smaller cities, where well water is used for drinking purposes, cess pools flooded from roofs where the water is designed to soak away in the earth, smaller excavations which when full are covered with earth, and the house over it moved to a new excavation, as is so frequently practiced, pollute the earth and the water going to wells. The establishment of water closets with individual and probably illy constructed drains, emptying into some near by stream or gully are sources of great danger and should be prohibited, In such small cities and towns every out house should have an excavation of sufficient size to contain the family's excrement for one year; this should be bricked up and cemented water tight; every spring at the city's expense and under direction of the local health officers, these vaults should be cleaned out, the contents carried to a remote place where sufficient excavation had been made, there mixed with earth and lime and allowed to remain undisturbed for a year or more, when it could be taken out and used for fertilizer without danger or offense, and greatly to the advantage of growing crops. By this means the subsoil in the towns would be kept pure, and likewise the water going into the wells.

A State law that permits the turning of the sewage of a great city into a water course, and worse, reversing the current of a river in order to

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accomplish this, thereby endangering the health and lives of thousands of its citizens, besides those of other states, is criminal.

In the matter of prevention of contagious diseases, city ordinances and rules of health boards, usually look tolerably well on paper, but to enforce the provisions is another matter.

The average American citizen is very willing to be protected from the contagion of his neighbor, but when it comes to protecting the neighbor from his contagion, that is an entirely different matter, and he is loth to have his children excluded from the public schools even for a short period, and the physician who enforces this quarantine is not apt to increase his popularity thereby. In mild cases of diphtheria, scarlatina and variola, diseases which are very frequently called by other names by the attending physician at the commencement of epidemics, also when the attendent chooses to regard membranous croup as non contagious, there is usually ample opportunity for the spread of these diseases among the succeptable.

A case illustrating the aversion of the average American to being inconvenienced for the benefit of others, is well impressed upon my mind.

A first case of diphtheria occuring on a certain season proved fatal. It was very easy to quarantine that family, and secure an efficient disinfection of the premises, as there were other children in the same family, and they escaped.

The next case was very mild, and was a man, the father of a large family of young children. He was confined to the bed only a few days. I promptly excluded his children from the school, and when fully recovered, directed him how to disinfect his house. He thought that unnecessary and neglected to do so.

Soon after the children of his family were allowed to return to school, they began dropping out, one at a time, for a few days each, and then returning to school, showing evidence of having been sick, until it had gone through the whole family.

About this time my own little girl was taken with diphtheria and came very near dying. My boy, a few years younger, was taken with the same disease, but had it in a very mild form.

During the illness of my daughter, this man came to me, frankly admitting that his children had all been having sore throats, with the same white patches (his wife said) as were in his throat when I attended him.

He had not consulted me about his children, for he well knew I would exclude them from school; in fact, they had had no physician, but fearing my daughter would die, his conscience reproached him and he came to express regret for not heeding my advice.

I think it will stand as a fact that the chief difficulty in the way of enforcing all health regulations, is the opposition of the people to be benefited thereby.

The same is probably true of efforts to regulate the practice of medicine. A careful selection of the material of which to make our health boards would seem to be of the first importance; after that we must have an increased amount of intelligence.

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Defectus Uteri—Report of a Case.

BY J. H. MILLER, M. D.,

PANA, ILLS.

Read before Annual Meeting of the District Medical Society of Central Illinois, at Pana, Ills.

ABOUT three weeks ago Mrs. A. F., a midwife, practicing in this city, brought to my office Miss I. B., aged 18 years. The midwife informed me that this young lady had never menstruated, and desired to learn the reason why she had not, and if possible, have this function established.

I was informed by this young lady that her mother had menstruated at the age of eleven years and is the mother of eight children. One sister, who is now twenty-seven years, has borne four children. Another, who is now twenty-twe years old, menstruated at the age of seventeen years and is the mother of one child. One aunt, a sister to her father, menstruated first at the age of nineteen.

The young lady is the picture of health, cheeks rosy, eyes bright, body well nourished and plump. In height, she is five feet and three inches, and weighs one hundred and forty-five pounds. For about three days out of every thirty she has pains in the back, headache, pains in the region of the ovaries, frequent and somewhat painful micturition and occasionally nose-bleed, but this is not a regular occurrence at this period, but troubles her at other times during the month.

The mammae are large and well developed, nipples small and flat and there is almost entire absence of pigmation of areola about nipplo.

The hair of the scalp is rather abundant and of good length, but absence of hair in the arm pits and only a stunted growth on the pubes. On digital examination, I found the hymen intact but somewhat relaxed. I carefully explored the vaginal walls for a cervix, but being unable to find one, I placed the patient in the Sims position and made thorough inspection of the walls and discovered no evidence of a cervix or uterus, The vagina was about three inches in depth. A little more than half way up on the anterior wall, a pit or depression was found, as though there might be a muscle attached above, pulling the wall at this point. It may be only a thin muscular band or a simple thickening of the posterior wall of the bladder. A digital examination at this point failed to discover any thickening or enlargement. The folds on the anterior walls of the vagina were well marked but the clitoris showed only a rudimentary development.

Bi-manual manipulation in each ovarian region elicited pain and leads me to believe these organs are present but rudimentary in development. This is a condition to her advantage and comfort inasmuch as a pair of well developed and active ovaries along with the other conditions present would render an ovaritonomy necessary for the relief of a painful but unsuccessful attempt at menstruation.

41 S. Locust St.

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Physical Basis of Insane Delusions.

BY W. J. CHENOWETH,

DECATUR, ILLS.

Read Before the District Medical Society of Central Illinois at Pana.

BEING a witness in the case of Frank Smallwood against the executor of Joseph P. Smallwood, the significance and basis of insane delusions was forced on my attention.

The subjoined statement was obtained, in part, from the prosecuting attorneys. What is added is from personal observation.

Joseph P. Smallwood died at Decatur, Ills., aged sixty-eight. He disposed of property exceeding one hundred thousand dollars in value by will, in which provision was made for the appointment of an executor whose duty it was to take possession of his entire estate, and to hold it in trust during the life of his son, his son's wife and their two children, and until twenty years after their death, at which time the property was to be sold and divided among his grand children. And he further arranged that his executor should provide comfortably, but not extravagantly for his son during his life. The executor was expressly forbidden to build, or to improve any part, or all of his property while in his possession. To a mistress who was living in the house with him, he bequeathed about twenty-five thousand dollars worth of property during her life, and instructed the executor to provide for heating the house in which she lived, and to meet all other incidental expenses; and gave her a large number of jewels. and the contents of the house in which she lived, for life.

This will was attacked on the ground of insanity, and the proofs offered were:

1. The character of the will.
2. The obscene and profane character of Smallwood's conversation.
3. Indecent exposure of his person by sitting in a window fronting the street, while in his night shirt only, with his feet on the window sill and his knees drawn up, while persons passing would be within from three to six feet from him.
4. That for a number of years he kept prostitutes in his house and that he was frequently seen by a man servant in bed with his last mistress.
5. He had hallucinations. At one time ordered a servant to take away a dog, which was barking in the basement, and sell him, when no dog was there.
6. He was jealous of his prostitutes.
7. He requested to be read at his funeral an article abusing the bible, declaring that there was neither heaven nor hell. During his life he derided the mission of Christ and spoke of his birth in a most disgusting manner. He gave explicit orders that no preacher should officiate at his burial.
8. At least seven years before his death he was at times compelled to seek the aid of a physician to empty his bladder, because of retention of

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urine from prostatic enlargement. He had cystitis four years before death, at that time chronic. The immediate cause of his death was uremia associated with disease of the kidney. A short time prior to death external urethrotomy was performed for removal of a broken catheter.

Some light may be thrown on this case by giving a few items of his history. If not born in Macon county, he was brought here when an infant and passed the greater part of his life in Decatur. When a youth, he assisted one of his brothers in blacksmithing. When a young man, he went to California, and on his return, married. His wife dying, he married a second time. This wife, who was the mother of Frank Smallwood, secured a divorce from him because of a woman. He soon married again, his wife dying in a few years. After this he devoted his time chiefly to horse racing and was said to have made the greater part of his money on the turf. Finding sale for a fast horse which he owned, at a large price, he retired, and for four or five years has resided in Decatur. Soon after giving up sporting he had several lewd women living in his house, but after a time limited his attention to a single mistress. He owned and lived in a comfortable house near the business part of the city, on a public street, and diagonally across the street and within about one hundred feet of the public school house. He had an extensive acquaintance and a large number of friends, and was generally noted for possessing a number of brilliants.

I believe that Smallwood should not be held responsible for his transgressions of the law of morality, because it is evident, that influenced by disease, he did what he thought was right, and was persuaded that everyone else was wrong. The delusions which controlled him were not the results of hallucinations, but of permanent changes of cells in some part of the psychic area which caused false views of his obligations to society and to his friends, and caused him to persistently do what was condemned by everyone but himself. He evidently regarded his abusive and scurrilous language as irrefutable arguments which ought to convince the most ultra Christian of the error of his beliefs. His acts were objective expressions of subjective views, manifestations of his religious convictions, and if he had been surrounded by fanatics like himself, might have resulted in destruction of churches and murder of ministers, as is witnessed periodically in Turkey and China. So long as mental, moral, and spiritual accompaniments of the body were regarded as separate entities, it was not possible to conceive of disease of the brain as accountable for moral delinquities. On that account, when men disregarded established moral obligations, they were supposed to be under the control of diabolical agencies and could only be liberated by prayer and exorcisms. Such belief did injustice to the insane, and placed them out of the reach of treatment. There are three things in Smallwood's case giving evidence to insane delusions. 1.—The beastiality of his conduct, as shown by the exposure of his nakedness where women and children were liable to see him; manifested in his filthy talk; and especially noticeable in his blasphemous utterance in reference to the birth of Christ. 1.—His pursuit of gain and control of his property, as seen in his order to *sell* a dog which, in a fit of delirium, he supposed to be barking in the basement of his house. And the attempt to control his prop-

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erty after death through the agency of an executor, which, if successful, might reach through a century. The provision for his son might have benefited him, but was evidently intended as a provision for himself, so thas when he died he might have the satisfaction of knowing that he still had the management of his property.

Smallwood's will and the declaration of his opinion of the teachings of the bible are different phases of his egoistic character, through which his vanity and self love found outlets for their display. The source from which originated the desire to retain property after death, and the vulgar display of his religious convictions, is the same.

Maudsley lets a flood of light upon this whole case in comments of religious manifestations in an entirely different direction. "Those who make it their business to get rich by overreaching and deceiving others, invariably end by deceiving themselves in the sincere assumption of religious observances inconsistent with the tenor of their daily lives."

Up to the time of Smallwood's retiring from the race course, no complaint of his protrusive infidelity was made. Whatever may have been his convictions, he was reserved in expressing them. But after organizing a harem in a civilized community, which was inconsistent with his previous respect to law, manifested by marriage to three degenerate women, in a legal manner, his aim seems to have been to propagate heretical beliefs.

The third (3) and most characteristic evidence of insanity was his veneral excesses. Such excesses constitute an important part of the statistics of insane asylums, and if all the cases sent to them and assigned to other causes could be known, the number would be largely increased. There are but few homes for the insane where each morning fails to bring complaints from some of the inmates of salacious encounters and accomplished rapes, which occurred during the previous night. And the number of cases of masturbation (simply another form of venereal excess) annually admitted, swell the statistics of every catalogue issued. While these excesses are acknowledged causes of insanity, alienists assign the excesses to insanity in numerous instances. In this case the venery may have been cause or consequence. That a man past sixty-five years old should indulge in veneral excesses such as send strong young men to asylums, is prima facie evidence of insanity.

For Functional Dyspepsia in Children, Dr. A. von Grimm (*N. Y. Post-Graduate*) recommends:

℞ Pepsin. pur..... gr. vii
Ac. hydrochlor..... ʒ ss
Aq. dest..... ʒ iii
M. Sig. A teaspoonful after each feeding.

Also,

℞ Calomel..... gr. $\frac{1}{10}$
Magnes. carb..... gr. v
Ft. chart, tal. No. v. Sig. One every hour.

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Reports on Progress.

COMPRISING THE REGULAR CONTRIBUTORS OF THE FORTNIGHTLY DEPARTMENT STAFF

GENERAL SURGERY.—C. E. Black, M. D., Jacksonville, Ill.

DISEASES OF THE CHEST—W. W. Bulette, M. D., Pueblo, Colo.

INTESTINAL AND RECTAL SURGERY—S. G. Gant, M. D., New York City.

DISEASES OF THE MIND—Frank C. Hoyt, M. D.

RHINOLOGY AND LARYNGOLOGY—John A. James James, M. D.

GENITO-URINARY SURGERY AND SYPHILOLOGY — Bransford Lewis, M. D.

OPHTHALMOLOGY—J. Ellis Jennings, M. D.

ORTHOPEDIC SURGERY — Phil. Hoffman, M. D.

GYNECOLOGY—Josephine Milligan, M. D., Jacksonville, Ill.

OBSTETRICS—R. B. Murphy, M. D.

MEDICINE — Frank Parsons Norbury, M. D.

CLIMATOLOGY—Hubert Work, M. D., Pueblo, Colo.

PATHOLOGY AND BACTERIOLOGY—Rutherford Gradwohl, M. D.

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LONDON CORRESPONDENT — R. T. Hewlettt, M. D., M. R. C. P., Chief Bacteriological Laboratory, Jenner Institute of Preventive Medicine, London.

MEDICINE.

BY FRANK PARSONS NORBURY, M. D.

Formerly Resident Physician Pennsylvania Institution for Feeble-Minded Children; Formerly Assistant Physician Illinois Central Hospital for the Insane; Physician to Oak Lawn Sanitorium and Passavant Memorial Hospital; Neurologist to Our Savior's Hospital; Lecturer Psycho-Physics, Illinois College.

AND EGBERT W. FELL, B. S..

JACKSONVILLE, ILL.

The Associate Infections of Scarlet Fevers.—The object of Jacques' paper (*Journal A. M. A.*, Dec. 19, 1899) is to show that scarlet fever is seldom a single infection and that its successful treatment requires a knowledge of all the factors. He has found the coccus described by Dr. Closs in all cases examined. One bacterial infection may so lower the resistance of the patient that other infections may take place. Thus it is in diphtheria associated with scarlet fever; the infection with scarlet fever coccus permitting infection, which would otherwise not have taken place, by Klebs-Loeffler bacillus. The presence of diphtheria may be completely covered up by the symptoms of scarlet fever, aud if death results, the more important factor may not have been recognized. Different authorities vary greatly as to the frequency of this double infection. Most scarlet fever cases develop into streptococcus infections. The glands of the bucal region often become involved and the infection may extend to the middle ear. Influenza, measles, mumps, etc., are apt to accompany or follow scarlet fever. The author emphasizes the necessity of frequent bacteriological examinations. It is only by this means that we can determine the nature of the infections and apply the proper treatment.

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A Preliminary Note on Antipneumococcus Serum.—(McFarland and Lincoln, *Journal A. M. A.*, Dec. 16, 1899.)—The pneumococcus is present alone in seventy-five per cent of cases of croupous pneumonia, in combination with other bacteria, about fifteen per cent. It is also present in the complicative and sequelæ, such as meningitis, endocarditis, empyema, etc. Its presence in the blood is usually fatal. Inoculation of animals causes lesions similar to and sometimes identical with those of croupous pneumonia. Immunity was first produced by F. and G. Klemperer by the use of filtered cultures. It is now known that immunity can be produced by live cultures, either virulent or attenuated and by filtered or unfiltered dead cultures. The most important recent work has been done by Washburn, De Perzi and Pane, who used the serum of a horse to which had been administered first dead, then virulent cultures. One centimetre was necessary to protect a rabbit. The coccus produces very little toxin, the symptoms being due to local rather than systemic infection. An anti-infectious serum like Washburn's or Pane's is therefore indicated rather than an antitoxic. The work of the authors has been along the same lines as Washburn and Paner It is hoped that the serum will act on the pneumococci in the lungs, the immediate effect of its use being reduction of temperature, strengthening of the pulse, production of an early crisis and prevention of metastatic inflammation. The use of serum has so far given very satisfactory results.

Typhoid Fever in the Young.—A Jacobi in *Pediatrics* of December 15, 1899, advises the study of the older works, such as Taupin's Relliet's and Edmund Fuedrich's. The opportunities for infection are the same in the young as in the adult. Water is usually the medium, and the fact that it is generally boiled explains the relative absence of typhoid in the first years of life. The severity of the illness does not correspond with body temperature, the worst cases of sepsis sometimes exhibiting the lowest temperature. The rise in temperature is mostly gradual. It is high in the second stage, and frequently irregular, owing to complications, such as otitis media, scarlatina, malaria or suppurating arthritis, or to the nature of the individual infection. The lips, tongue and mouth exhibit the same surface changes of the epithelium as in the adult. Vomiting is noticed in bad cases. Diarrhea of a catarrhal nature, depending on the presence of toxins or of ulcerations, is a frequent symptom. Intestinal ulcerations are not invariably met with, and when present do not necessarily cause diarrhea. Constipation is a not uncommon symptom in the first as well as the second week. Gurgling in the ileo secal region is common in intestinal catarrh, and is not characteristic of typhoid fever. Tympanitis is usually moderate, extensive peritonitis being uncommon. The local form is, however, quite frequent. Hemorrhages are very rare, and are mild in children over four years old. The organs of circulation are not affected to the same extent as in adults. If the pulse becomes feeble and frequent owing to toxic and organic myocardial weakness, persistent stimulation should be resorted to. A decrease in the size of the spleen during the third week is a good symptom. Permanence of the swelling is infrequent and abscesses rare.

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The nasal mucous membrane is dry and irritated. Epistaxis occurs in older children. A catarrhal condition or ulceration of the pharynx and larynx may cause hoarseness and cough, or dyspnœa and strangulation. Bronchial catarrh is frequent; pneumonia, either catarrhal or hypostatic, may occur; pleuritis and diphtheria are rare. The urine is of high color; urea and uric acid are increased, and chlorides decreased. Indican, albumin, renal epithelium and casts frequently are present. The Diazo test is usually positive from the end of the first week to the middle of the third. The skin is usually dry. The characteristic roseola is the same as in the adult. Miliara and erythema, gangrene, abscesses, furuncles and pustules occur. Desquamation may be copious. Periostitis and osteomyelitis are uncommon. The nervous system is not affected as it is in adults. Ambulant cases are common. Headache is frequently complained of; grinding of the teeth, sopor, or delirium, and screams resembling those of meningitis are met with. Aphasia sometimes occurs; polyneuritis is not rare; hemiplegia is rare: paraplegia more frequent. Mania and melancholia are the forms of psychical disturbance most frequently seen. Typhoid fever may occur in the fœtus; it is rare in earliest infancy; more common in the second and third years, and after that time increases rapidly in frequency. Different authorities differ widely as to the years of greatest frequency and mortality. The diagnosis is sometimes difficult, the Widal and Diazo tests being important aids. Meningitis may be recognized by Kernig's symptom or examination of the cerebro-spinal fluid. The mortality varies according to season and the children, and ranges from 2 to 9 per cent, the very young and adolescents being more likely to succumb. Complications are dangerous; relapses not rare. The food should be liquid, and water should be given frequently. A purgative dose of calomel at the beginning, and warm water enemata later in the disease, act beneficially. For offensive diarrhea, permanganate of potassium or thymol enemata; internally, bismuth, sulpho-carbolate of zinc, salol and naphthalin. Collapse requires stimulants by mouth and subcutaneously. Chloral hydrate is the best hypnotic. Sopor or coma should be treated with cold affusions, while the body is submerged in water of 90 to 95°. Antipyrin is safer than acetanilid or salicylates. Cold and warm water are the safest antipyretics. As cold water is often contraindicated the author advises the use of warm baths, 90 to 95°, accompanied by friction, every three or four hours throughout the illness.

Hydriatic Measures in the Febrile Disorders of Infancy and Childhood.—(Baruch, *Archives of Pediatrics*, January, 1900.)—Water may be used advantageously as a substitute for antipyretic drugs. As a rule, the child should be immersed in water at a temperature of 90° for ten minutes, and then wrapped in a blanket. Repeat the bath every three hours, reducing its temperature 5° each time until 70 or 75° is reached; continue at this temperature as long as the patient's rectal temperature is above 103°. Improvement is shown in every way under this treatment; it contracts the cutaneous vessels, increasing the strength and diminishing the frequency of the heart beat. The abdominal compress at 70°, or in pneumonia the chest compress at 60°, is useful. Cold full baths are not well borne in scarlet fever. The sheet bath or wet pack followed by friction may be used when when objection is made to the full bath.

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Some of the Causes and Effects of Mouth Breathing.—Ingersoll (*Buffalo Medical Journal*, January, 1900) says that in children the most frequent cause of mouth breathing is adenoid growths in the naso-pharnyx. Hypertrophied tonsils and nasal polypi are also frequent. Deformities of the septum or turbinated bones sometimes occur. The results of the condition are many and widespread. The facial bones are not properly developed, the air-passages are in a state of chronic inflammation, there is a feeling of languor, a lack of endurance, and sometimes a functional heart trouble may be found. Deafness is common, and frequently causes inattention and an appearance of stupidity. The symptoms are relieved by the removal of the obstruction.

The Widal Reaction.—(Cowie, *Physician and Surgeon*, January, 1900.) The phenomenon of agglomeration and agglutination of bacteria in the presence of serum from an immune animal has long been known, but no practical use was made of it till in 1886, when Widal demonstrated its value in diagnosis of typhoid fever. The reaction occurs in all stages of the disease. The method of applying it is as follows: Fresh or dried blood, or the serum may be used. This should be diluted one to twenty or thirty. The culture may be made on peptone bouillon or agar. A macroscopical test may be made by adding a small quantity of culture to the diluted serum and allowing it to remain for twelve or twenty-four hours at a temperature of 37° C., when a white flocculent precipitate should occur if the test is positive. For a microscopical test a small quantity of the culture should be thoroughly mixed with the diluted serum and examined as a hanging drop. Clumping should occur in thirty minutes if the test is positive. This reaction may occasionally be observed in other conditions, but not so readily, or is so great dilution as in typhoid. "It would be an error to depend on the Widal reaction alone, for it is not the one symptom, but the gathering together of the most important symptoms that enables us to make a diagnosis. The Widal reaction is emphatically one of these, and its presence clinches the diagnosis."

Researches on Infection by the Tonsils.—Packard, in the Wesley M. Carpenter lecture, says (*Med. Rec.*, Dec. 16, 1899) that the tonsils are groups of lymphadenoid tissue which act as filters for the substances absorbed from their free surfaces. Micro-organisms may pass through them; acute tonsilitis is an acute toxemia. It is probably one of the functions of the tonsils to weaken the virulence of micro-organisms. The author has previously reported five cases of endocarditis following angina. He has noticed a number of cardiac cases having a history of severe attacks of sore throat and dry pleurisy in connection with angina. Two cases were reported showing the relation of tonsilitis to chorea, and the infection theory of this disease discussed. Pyemia as a result of tonsilitis has been noticed. The author considers rheumatism to be due to an infection, the symptoms being caused by toxine rather than by the bacteria themselves. The frequency of angina preceding rheumatism has often been noticed. The tonsils are often abnormal in fatal cases of rheumatism.

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PHILADELPHIA LETTER.

[SPECIAL CORRESPONDENCE.]

Bureau of Information for the A. M. A.—Reception by the College of Physicians —Medical Preparatory Course.

May 3, 1900.

During the meeting of the American Medical Association next month at Atlantic City, (which is but one and one-half hours away by rail) Philadelphia will be the central point of interest for most of the visitors from the Middle and Western states. To enable the visiting members to get the most out of Philadelphia's hospitals and dispensaries, the Philadelphia County Medical Society is organizing a bureau of information. The work will be directed by a committee of the society, who have provided a medical man to be present all the time at the College of Physicians, (13th and locust street) to answer questions and furnish information as to the work at the different hospitals and how to best reach them. The saving in time and friction to the visitor will be readily seen.

Ever since Dr. Weir Mitchell established an "entertainment" fund for the College of Physicians, there has been an evening of pleasantry for its members once in three or four years. Usually they have taken the form of dinners at which the attendance (numbering about 400) has been limited to the membership. This year the bars were let down, and 500 extra invitations went out to the trustees and other dignitaries of all allied institutions in the city (such as the various medical colleges and the different hospitals); also to our judges, prominent lawyers and business men. Advantages were taken of this opportunity to show the laymen how we fight off the forces of disease and death. To this end the Mutter Museum was freely called on. Dr. W. W. Keen, president of the college, received the guests, who were then shown up stairs by Dr. DeSchweinitz to the museum, where they were taken in charge by the committee who conducted the visitors about and explained how the numerous instruments of precision and therapeutic appliances were made use of in combatting disease. The interest shown by the laymen was more than ample return for the great trouble taken by the college authorities in arranging the evening. Retrospectively, the evening showed how, by such methods, the lay people may be brought to a much and more wholesome appreciation of the medical profession—and its hopes and its aims.

The recent ruling by the Medical council of Pennsylvania, absolutely requiring each of the four years of medical study to be carried out in a school of medicine, lends no little interest to the meeting of the Philadelphia County Medical Society just held. On invitation of the Society, there were present at the meeting the following presidents of literary colleges: Stahr, of Franklin and Marshall; Sharpless, of Haverford; Warfield, of Lafayette; Birdsall, of Swarthmore College—all of whom took part in the discussion. The law requires four years of medical study for candidates for the degree of M. D., the last three of which *must* be spent in a school of

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medicine. The first (or preparatory) year may be spent either in a medical school or any general college that gives a preparatory year in chemistry and biology to prospective students in medicine. The medical council has taken unto itself much authority in this overruling the law of the state. It was the sense of the meeting that the relations between literary and medical colleges should be better defined by the Medical Act of the State, so that a college graduate might be given due credit on entering the medical school, for previous work in chemistry, physics and biology. Among the medical men who discussed the question were, Dr. Henry Beates, president of the State Medical Council, and Drs. W. W. Keen, John B. Roberts, James Tyson and H. C. Wood, all of whom thought that the well prepared graduate of a literary college is certainly deserving of some advancement over the student who enters upon the study of medicine without such equipment. "Surely" it was said, "such credit should be given; the more so, in view of the fact that many of the minor medical colleges accept as students persons whose early training has been entirely inadequate—not even insisting upon an ordinary high school certificate.

WENDELL REBER.

LONDON LETTER.

Royal Army Medical Corps—The Mission of the "Maine"—Death of Sir Jas. Paget—Discussion on Tabes—Syphilis and Strains as Important Factors—"Sleeping Sickness"—Letsomian Lectures on Cancer of the Breast—London School of Tropical Medicine—Reconstitution of the University of London—Special Courses in the London Polyclinic.

LONDON, April 12. 1900.

At the present time the war is of course the all absorbing topic among all classes of the community. I am glad to say that the organization of the medical department in this campaign leaves nothing to be desired and the services of the Royal Army Medical Corps have been supplemented by the appointment of many well known civil surgeons, among whom I may mention Sir William McCormac, Frederick Treves and Watson Cheyne. Private benevolence has also not been idle. Hospital staffs and equipments have been provided by Lord Sveagle, the yeomanry and others. Last, but not least, we have to thank our kin across the sea for their hospital ship "Maine." Reports from the seat of war are eloquent as to the splendid work done by the medical staff. Every kind of wound has been met with, and some remarkable recoveries are chronicled. In fact it is stated that the only necessarily fatal wounds are those involving the heart. The first aid dressings which every soldier carries with him, have proved to be of the greatest service and are highly valued. I regret to say that Surgeon Captain Hughes, an old fellow student of my own, lost his life at the battle of Colenso. He was well known as an authority on Mediterranean fever.

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At the close of the old year there passed away most peacefully, free from the least pain of body, or trouble of mind, the great pathologist and surgeon, Sir James Paget, within a few days of completing his eighty-sixth year. He received his education first as an apprentice in a busy practice at Yarmouth and afterwards at St. Bartholomews Hospital, London, in the dissecting room of which he made his discovery of the "trichina spiralis." With his appointment as demonstrator of morbid anatomy, his career commenced, and his demonstrations drew crowded classes. In 1842 he undertook the preparation of the catalogue of pathological specimens in the museum of the Royal College of Surgeons, a model of catalogue literature which is all but universally adopted at the present day. He became assistant surgeon and surgeon to St. Bartholomews, surgeon to the Prince of Wales, and sergeant surgeon to the queen, and vice chancellor of the University of London. He was the author of a number of lectures and essays, president of many of the medical societies, and bore honorary titles too numerous to mention. He was an orator, and his lectures and orations were a treat to listen to.

SIR JAMES PAGET.

An important discussion has recently taken place at the Pathological Society on the pathology of tabes in relation to general paralysis of the insane. Dr. Mott, who opened the discussion, remarked that: (1) A certain number of cases of tabes might begin with mental symptoms, or mental symptoms in the form of crisis might occur in the course sf tabes. (2) A certain number of cases of general paralysis presented tabetic symptoms. (3) A few cases of tabes later developed well marked symptoms of general paralysis. An analysis of statistics showed that syphilis was by far the most important factor in the production of the two diseases. The most important physical sign in general paralysis, as in tabes, was reflex iridoplegia. Clinical phenomena, so characteristic of tabes, such as grey atrophy, ocular paralysis, perforating ulcer and Charcot joints, were also met with in general paralysis. The pathological processes in the two diseases are identical, namely a primary progressive degeneration of the neuron with secondary sclerosis and inflammatory conditions in the vessels or adjacent membranes, due to irritation, caused by the products of degeneration and a formative proliferation of the glia elements. There were many borderland cases which Dr. Mott considered formed an important link in proving the essential identity of the two diseases.

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Dr. Buzzard and Dr. Ferrier considered that syphilis was the all important factor in the production of tabes and general paralysis. Dr. Stewart suggested that strain of some sort thrown upon certain parts of the nervous system might determine what part of the nervous system was affected. Much walking in a syphilitic patient might induce tabes, mental strain general paralysis. Dr. Mott, in his reply, said that he viewed the syphilitic toxin as inducing an inherited or acquired diminution in durability of the nervous elements.

Two cases of "sleeping sickness" or "African lethargy" have recently been under tho care of Dr. Manson, at the Charing Cross Hospital. The cases are limited to certain parts of Africa and the disease may have a lengthened latency. Clinically, there are three stages: (1) Physical and mental languor. (2) Sleep and indifference, though the patient can be roused. (3) Tremor, emaciation, convulsions and death. There is no impairment of reflexes and the eyes are normal. The filarias perstans has been invariably found in the blood. Nothing of importance was discovered at the post mortem. Dr. Mott examined the nervous system and reported that there was a lepto-meningitis and encephlo-meningitis and the perivascular limits especially of the medulla, were crowded with mono-nuclear leucocytes. No micro-organisms could be detected during life or after death. In spite therefore of the careful examination of these two cases by all modern methods the disease remains a mystery.

Sir William Banks has been delivering an interesting course of Lettsomian lectures on cancer of the breast. After reviewing the statistics he comes to the conclusion that the alleged increase in cancer is a fact, and suggests that richer and more abundant foods are responsible for this. He believes to some extent in heredity and traumatism as predisposing factors. Sir William Banks was one of the first to advocate clearing out the axilla in all cases. He does not consider, however, that much can be done when the supra-cavicular fossa is affected.

The London School of Tropical Medicine promises to be a great success. Although only opened in October, no less than fifty-two students have passed through courses of instruction during the last two sessions. The school has also been recognized by the reconstituted University of London.

At last we seem to have a fair prospect of the institution of a university worthy of the name in London. Up to the present the University of London has been only an examining body, and valuable work it has done in this capacity. Now, however, it is to be reconstituted. Professors, lecturers and teachers are to be appointed and recognized. Many of the existing colleges and individual schools will be affiliated and will become constituent colleges of the new university, while the university itself is to be removed to the fine buildings of the Imperial Institute, which should prove a worthy home for it.

The London Polyclinic seems to be doing excellent work. In addition to the large number of post-graduate lectures and practical classes, the council are taking up the collective investigation of diseases, e. g. tubercle, leprosy and yaws, and valuable information should thus be obtained. American graduates who intend visiting England should obtain a prospectus from the secretary.

RICHARD T. HEWLETT.

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Society Proceedings.

ILLINOIS STATE MEDICAL SOCIETY

Meeting at Springfield, Ill., May 15-17.

REPORTED ESPECIALLY FOR THE MEDICAL FORTNIGHTLY.

Over three hundred physicians were registered as being in attendance upon the meeting of the Illinois State Medical Society at Springfield. This fact alone demonstrates the interest being shown in medical organization in Illinois. Dr. Harold N. Moyer, of Chicago, as president of the Society, the Springfield committee of arrangements and the other officers of the Society are to be congratulated on the success of this splendid meeting.

The Scientific program, as published in our last issue, was carried out in full with but few exceptions—not many authors were absent and a few papers were crowded out for want of time.

THE MEDICAL SECTION

was full to overflowing, necessitating some of the most valuable original papers being read by title. Especially was it unfortunate that the paper on Leukaemia by our esteemed freind Dr. E. J. Brown, of Decatur, was read by title, as it embodied the most exhaustive search of the literature of to-day yet published, and detailed a thorough clinical study of two cases.

THE SURGICAL SECTION

attracted considerable attention and its program was unusually practical and useful in the material presented. Section Three, on

STATE MEDICINE, HYGIENE AND ETIOLOGY,

gave timely consideration to topics now before the profession, viz.: tuberculosis, epileptic colony and medical education, together with other useful papers.

The address by the president, Dr. H. N. Moyer, subject, "Tendencies of Modern Medicine," was delivered Tuesday evening before an appreciative audience composed of members of the Society and citizens of Springfield.

On Wednesday evening occurred the annual banquet, the feature of which was the celebration of the semi-centennial of the Society. Dr. J. H. Hollister, of Chicago, officiated as toastmaster and toasts were presented as follows:

"The Founders of the Illinois State Medical Society," Robert Beal and L. C. Thompson, both of Lacon.

"Medical Education for Fifty Years in Illinois," N. S. Davis, Chicago.

"Then and Now," James T. Stewart, Podunk.

"Reminiscences of Early Day Practice and Hardships of the Pioneer Doctor," W. J. Chenowith, Decatur.

"The Parson to the Doctor," the Rev. D. F. Howe, Springfield.

"Reminiscences," C. C. Hunt, Dixon.

"Law and Medicine," Judge Charles P. Kline, Springfield.

"The Ideal Physician of the Future," F. P. Norbury, Jacksonville.

THE NEW OFFICERS.

The report of the nominating was received and adopted, resulting in the election of the following officers:

President—G. N. Kreider, Springfield.

First Vice-President — Weller Van Hook, Chicago.

Second Vice President — Denslow Lewis, Chicago.

Assistant Secretary—O. B. Will, Peoria.

Treasurer—Everett J. Brown, Decatur.

Permanent Secretary—Dr. Edmund W. Weiss was continued.

The officers of the sections are as follows:

Section One—Medicine: Chairman, Charles D. Center, Quincy; secretary, G. W. Nesbitt.

Section Two — Surgery: Chairman, M. L. Harris, Chicago; secretary, W. F. Grinstead, Cairo.

Section Three—State Medicine, Etiology and Medical Jurisprudence: Chairman, Frank P. Norbury, Jacksonville; secretary, C. C. Carter, Rock Island.

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GEORGE NOBLE KREIDER, M. D.,

SPRINGFIELD, ILL.

President-elect Illinois State Medical Society.

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The following committee selections were made:

Judiciary Council (for three years)—Messrs. Ensign, Mitchell and Harny.

Necrology and Biography—J. H. Hollister, Chicago; O. B. Will, Peoria; A. C. Corr, Carlinsville.

Legislation—Carl E. Black, Jacksonville; H. W. Moyer, Chciago; J. A. Egan, Springfield.

Medical Societies—C. W. Hall, Kewanee; J. A. Baughmann ,Negoa; E. J. Raab, Belleville.

Arrangements—J. D. Rensly, M. L. Marcy, A. J. Ranne, C. H. Brobst.

The next convention, in 1901, will be held in Peoria.

THE EXHIBITS.

The exhibit was well managed: there was plenty of space, excellent light and ample facilities for all. The exhibitors were as follows:

Searle & Hereth Co., of Chicago, in charge of the "all American" Ben R. Smith and B. Halloway.

W. .R. Grady & Co. and Sharp & Smith, of Chicago, made the only exhibits of instruments.

Smith, Kline & French had an excellent display of Eskay's Albuminized Food, in charge of Dr. J. W. Van Winkle.

Keasbey & Mattison Co. were represented by Dr. A. B. Conklin.

The Globe Co., of Battle Creek, Mich., had a very practical exhibition of their improved nebulizers. W. L. Root was in charge.

The ever reliable G. F. Harvey Co., of Saratoga Springs, N. Y., had their right-hand man, G. O. Bechtol, in charge, ably assisted by A. P. Darby.

The Imperial Granum Co. had a magnificent display under the care of G. F. Wilcox.

W. R. Warner & Co. as usual had a well arranged exhibit, in charge of W. K. Sutliff.

Horlick's Malted Milk Co. dispensed refreshments in their usual liberal manner, A. W. Hobart being in charge.

The Maltine Co., of New York, were markedly in evidence with their "Maltine with Creosote" and other excellent combinations of this useful product. C. J. Gibson was the host on this occasion.

H. K. Mulford Co., of Philadelphia, had one of the most elaborate and complete exhibits of their up-to-date pharmaceutical specialties. The exhibit was in charge of the Chicago branch of this leading house, with David Miller, E. R. Dorey and Chas. W. Mainwaring as custodians.

Fairchild Bros. & Foster, the omnipresent exhibitors at the Illinois State meeting, again demonstrated their ability to lead in their specialties. B. A. Gardner and O. W. Schmidt presided.

The Tilden Co., of New Lebanon and St. Louis, were on hand, represented by the time-tried and fire-tested veteran, Chas. H. Klauenberg, assisted by Turner Currans. The Tilden freinds are legion, as was shown by their greetings from visiting members.

Lea Bros. & Co., of Philadelphia, were the only publishers represented. Their excellent publications were displayed by O. P. Irwin, of Danville, Ill.

W. D. Allison Co., of Indianapolis, displayed their physicians' tables.

Malt Diastase Co., New York. with its various preparations of Maltzyme, had a most elaborate exhibition and it was appreciated by the visitors. This company is fast winning its way in the West and a little more judicious advertising would serve to introduce it more fully among the profession. Dr. P. P. Mauk, Chicago, was "Mine Host" for Maltzyme.

Kress & Owen Co., New York—Glyco-Thymoline" — were distributing samples of their excellent preparation.

Other exhibitors were: Allen & Hanburys' Milk Food; Milkine Co., of Elgin; Billings Clapp & Co.; Frederick Stearns & Co.; Parke, Davis & Co.

The medical journals represented at this meeting were: The Medical Fortnightly, Journal American Medical Association, Peoria Medical Journal, Chicago Medical Journal, Chicago Clinic, Therapeutic Gazette, Medical Age, Medicine, Medical Standard, Doctors' Magazine.

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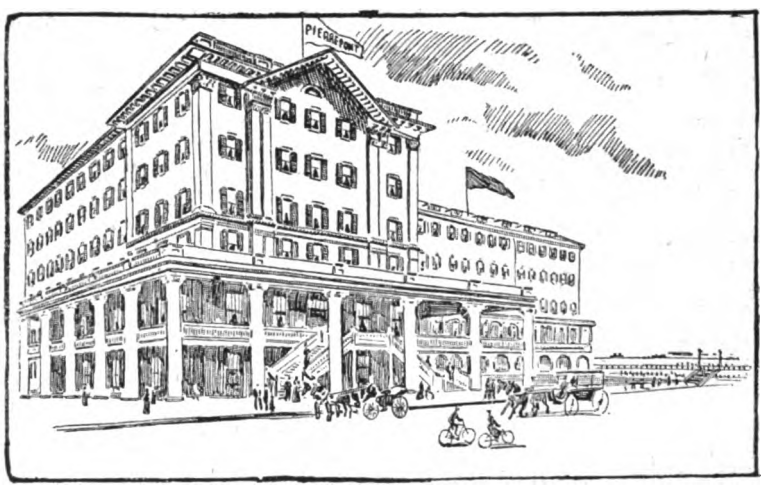
WHEN TO GIVE MEDICINES.—Iodine or the iodides should be given on an empty stomach. If given during digestion, the acids and starch alter and weaken their action. Acids, as a rule, should be given between meals. Acids given before meals check the excessive secretion of the acids of the gastric juice. Irritating and poisonous drugs, such as salts of arsenic, copper, zinc, and iron, should be given directly after meals. Oxide and nitrate of silver should be given after the process of digestion is ended; if given during or close after meals, the chemicals destroy or impair their action. Potassium permanganate, also, should not be given until the process of digestion is ended, inasmuch as organic matter decomposes and renders it inert. The active principle of the gastric juice is impaired and rendered inert by corrosive sublimate, tannin, and pure alcohol; hence they should be given at the close of digestion. Malt extracts, cod liver oil, the phosphates, etc., should be given with or directly after food.—*Health.*

ALL ABOARD FOR ATLANTIC CITY.—Excursions to the American Medical Association will be leaving this city in a very few days and we would urge all those who are dilatory about taking in this meeting to hesitate no longer. In order to be present at the opening session it will be necessary to leave here Sunday. The B. & O. party will be landed in Atlantic City early Tuesday morning, and present plans indicate that all the time spent enroute will be made most enjoyable, as both the B. & O. people and your fellow travelers are conspiring that this shall be one delightful vacation from start to finish. Berths should be reserved at once. Reservations should be made through the editor or direct through the City Passenger Agent, Mr. F. D. Gildersleeve.

HOTEL PIERREPONT.—We present below an illustration of this famous holtelry at Atlantic City, which will make special low rates for the delegates to the American Medical Meeting. Write to Mr. John R. Pugh, Chief Clerk, for your reservation of rooms.



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The Medical Fortnightly.

Issued Tenth and Twenty-fifth of Every Month by the Fortnightly Press Co.

UNDER THE EDITORIAL DIRECTION OF

FRANK PARSONS NORBURY, M. D. AND THOS. A. HOPKINS, M. D.

Secretary: CHARLES WOOD FASSETT, M. D.

A COSMOPOLITAN BIWEEKLY FOR THE GENERAL PRACTITIONER

Editorial Offices in St. Louis, Chicago, Cincinnati, Jacksonville, St. Joseph, Kansas City, and Pueblo, where specimen copies may be obtained and subscriptions will be taken.

Address all business communications to the Fortnightly Press Company.

Address all contributions and books for review to the Editors, Suite 312, Century Building, Saint Louis.

Paris: U. S. Press Building, Espanade des Invalides, Paris Exposition.

Volume XVII **JUNE ELEVENTH** **Number 11**

Editorial Department.

The High School and Medicine.

THE trend of medical education is, as every physician well knows, toward better preparation of students before they enter medical college and thoroughness after they enter upon their collegiate course. There are several medical colleges which require a college degree from those who would be matriculants, but the great majority as yet only insist upon a good preliminary education. Consequently, many matriculants have not even an average grammar school training, while high school graduates, like college men, are in the minority. However, the high school graduate is becoming more and more a power in every community where "this college of the people exists." And it is from the high school graduates the majority of the physicians of the future are to be recruited, for the preliminary demands now being required can only be met by such a training or of college training. The high school should be the pride of every citizen, the inspiration of popular favorable sentiment for higher education, for it is a blessing to every citizen, whether he directly or indirectly feels its influence.

The welfare of every community is subserved by free public education; thousands of young men and women are enabled to fit themselves for better service in life because of the facilities afforded by the public schools, who never could have gained an education without them, and the high school acts in a measure as the selective agent in helping young men onward in the path of education. The high school is a democratic institution essential for the public welfare, and it directly affects the welfare of medicine by putting into its ranks select and good material. Let us encourage the high school system, inveigh against its political disruption, and work to elevate its standard, that every citizen may feel the wholesome influence which it imparts to every community, and medicine as a profession be helped by having more thoroughly prepared men enter its ranks.

F. P. N.

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The Right of Criticism.

EVERY individual is entitled to his private opinion; every editor is entitled to his belief, whether it be right or wrong, as viewed by others, and the fearless editor cannot be deprived of the right of criticism. It is true that some editors abuse this inalienable right, while others are afraid of sweeping criticism, because of that peculiar dread of censure, which makes cowards of us all. However, as Wingate well says, "Every individual, however humble, should insist strenuously on the right of private judgment, and repel the assumption that there is culpability in not absolutely accepting the prevalent political or religious beliefs. In view of the right of criticism it is but just that the editor be allowed to look at life and its changing views through his own glasses and draw his own deductions. We propose at least to stand on our own propositions, and we trust still remain a gentleman, make few foes, and a host of friends.

F. P. N.

The Discussion of Papers.

IT IS to be hoped that the era of improved discussion of papers read before medical societies, is dawning. There is a faint glow in the East which already has its reflection in the West, indicating the approach of this long-hoped-for day. Outside of the meetings of special medical organizations the discussions of papers vary with the enthusiasm of the audience and the preparedness of those interested in the papers presented. The fruitage of such a combination may be a profitable discussion, or it may be a superficial chasing after a few butterfly arguments, leaving the real juice of the matter behind. The specific errors of such a method of discussion are apparent, especially when a heterogenous program is presented, such as is frequently observed when our State medical societies convene. Then we notice how often a good paper, practical in its application, and logical its deductions, is allowed to be read without comment, while some author presents a paper interpolated with sensational assertions, illegitimate corallaries and unwarranted interpretations is congratulated, and members, like sheep, fall over each other in their endeavor to get in the sedative path of reasoning, and "to be in at the death."

The glaring falsity of some arguments are lost sight of by tendency of all *discussion* to diverge from the main line and be sidetracked in some sand pit. The result, occasionally a paper is allowed to slip through the sieve of scientific discussion and be stamped with approval, simply because discussion from its consecutive arguments was allowed to be side-tracked and wrecked *in talk*. The introduction of the abstract presented by the author some time before the meeting, stating his specific propositions and his line of argument, published and distributed, is causing the revolution in medical discussion. It is the true solution of the problem, and will be the means of bringing order out of chaos, and profit out of incoherence. The pathway of discussion will not be a labyrinth wandering where it will, but will be like that geometrical definition of a straight line, "the shortest distance

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between points." This may be further improved by having leaders of discussion appointed who will be as painstaking as the author in their preparation. Then the important points of a paper will be hit, and the audience, who presumably attend medical meetings for profit, will go away repaid for their coming. Unnecessary talk, introductions and useless babble and verbiage will be consigned to its proper quarters, the curbstone, and definiteness will crown the results of proper discussion.

Another bore in discussion to which practical men object, is the omnipresent individual who wants to discuss every paper, and who thinks he is prepared to discuss from a to izard—from bald head to corns on the soles of the feet. How to handle and suppress him is a problem which tact and perseverance may yet solve, but just now the way has not been discovered. However, it is the duty of every individual, or program committee, to insist upon abstracts of papers to be presented, and to attempt at least to arrange for and superintend discussion. F. P. N.

The Bubonic Plague.

THE Associated Press dispatches of May 20th, announce that the bubonic plague has really found lodgment in San Francisco. There appears to have been some conflict of opinion as to the real nature of the disease when it first appeared in Chinatown, but now the general belief is that it is "the plague." The United States Hospital Marine Service has taken cognizance of its existence, and has sent additional medical officers to care for the quarantine service and look after the prevention of the spread of the disease. The Board of Health of San Francisco has established a drastic quarantine, and propose to inoculate the Chinese with the anti-plague serum. Thus far the disease has appeared only among the Chinese, and to further protect them and prevent the spread of the epidemic the Haffkine serum is to be used. The United States Marine Hospital Service has just sent 25,000 bottles of serum to San Francisco, together with special apparatus for its use. Surgeon Kinyoun is in charge, and he, with his assistants, are prepared to wage a vigorous campaign against this pestilence.

A paper on the Bubonic Plague in San Francisco, by W. H. Kellogg, City Bacteriologist of San Francisco, appears in the *Journal of the American Medical Association*, May 19, 1900. The author says, "Just how the disease was introduced into this country is a mystery, as the first case discovered was a Chinaman who had been in Chinatown sixteen years. The probability is he was not the first, as this theory is strengthened by the fact that there has been an increased mortality during the months of January and February. The bacteriological examinations, conducted by Dr. Kellogg, from smear preparations taken from a case dying under suspicious circumstances pointing to bubonic plague. Cultures were made and experiments conducted at the Government Laboratory, U. S. Marine Hospital Service, which confirmed the suspicions of the case being bubonic plague. The later history as now recited in the daily press, also confirms Dr. Kel-

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logg's assertion, that "it would not be surprising if other cases were discovered in the near future." Vigilant quarantine will be waged by National, State and city authorities, and it is to be hoped the epidemic will be short-lived. The wisdom of extending the usefulness of the Marine Hospital quarantine service is once more verified, and we are sure that it alone can handle the grave question if allowed to do so under the wise supervision of Surgeon-General Wyman. F. P. N.

The Bransford Lewis Ureter-Cystoscope.

IT IS a matter of not a little pride to us, as it should be to all the St. Louis profession, that the most successful ureter-cystoscope obtainable is devised by one of our own number. Successful ureteral catheterization has heretofore been accomplished with considerable difficulty while the complexity of the instruments made their field of usefulness very limited, the desideratum has been an instrument which would permit direct vision to guide our movements, which would permit not only ureteral catheterization, but simultaneous examination *and treatment* of the bladder, and one which would combine simplicity of construction, sterilization and manipulation. It seems that Dr. Lewis' instrument combines all these desirable features.

It consists of a tube, which carries on its upper surface, the conducting-wires for the electric light, and within, on its lower wall, a small tube for guiding the ureteral catheter to the desired point, i. e., into the ureteral opening. At the ocular extremity is the handle for controlling the direction of the instrument; at the distal end, contained within the curved tip, is the electric lamp, of low tension, affording sufficient light for illumination, but generating hardly any heat; permitting, therefore, the use of the cystoscope within the empty bladder and without the complicating presence and, often, interference of fluid. The light from the lamp is shed on the adjacent membrane through the glass window sealed in the roof of the tube just below it.

The window is so placed that should it become smeared with pus or blood it can be easily cleaned by a wire swab without removal from the bladder.

To facilitate introduction into the bladder, an obturator is furnished, which closes the distal orifice until it is removed, preventing scraping of the membrane against the edges of the opening; but, at the same time, these edges are so rounded that they may be brought in contact with the membrane within the bladder, or moved while against it without injury to the surface coming in contact with them.

A small silk-web ureteral catheter completes the instrument.

From this brief description, which comprises all essential details, it is evident that the instrument is extremely simple; and that is one of its chief advantages. Its freedom from complexity relieves it of many of the sources of difficulty encountered in the use of the older forms. It has no lenses to become clouded or intervene between the eye and the object of investigation.

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The lamp is brought within a half-inch of the membrane undergoing search for the ureteral opening, which directness and closeness of illumination is of immense advantage in facilitating its discovery.

The fact that the instrument can be withdrawn leaving both the ureteral and uretheral catheters *in situ* gives an idea of the diagnostic possibilities it gives us.

We hope shortly to be able to give our readers a detailed and illustrated description of this instrument which it certainly deserves.

T. A. H.

DR. JOSEPHINE MILLIGAN, of Jacksonville, Ill., one of our editorial staff, has taken her departure for Europe, where she will pursue post-graduate work in Paris and Berlin.

THE EARLY RECOGNITION OF PULMONARY TUBERCULOSIS.—A very elaborate and exhaustive paper on this subject by our esteemed friend, Dr. George W. Webster, of Chicago, appears in this issue. By permission we publish this valuable paper, which appears also in the *Chicago Medical Recorder* and *The Medical Examiner*, because it is timely, full of suggestions and fully covers the early diagnosis of the disease of pulmonary tuberculosis, as viewed in the light of modern knowledge. This paper is especially valuable to the young practitioner, enabling him to consider differential diagnosis in a most exhaustive presentation of diagnostic facts. Further, it is practical, truly clinical and a basis for good clinical work.

W. B. SAUNDERS & CO.—Mr. W. B. Saunders wishes to announce the final accomplishment of a step that he has long had in mind. Feeling that the growth of the business to its present large proportions has been due, not alone to his own exertions, but quite as much to the efficient co-operation of a number of his employees, he has decided to give recognition to such service by associating with himself in business, under the firm name of W. B. Saunders & Company, Mr. F. L. Hopkins, Manager of the Subscription Department, and Mr. T. F. Dagney, Manager of the Publication Department. These gentlemen have been connected with the establishment almost from its inception, and to their capable management of their respective departments Mr. Saunders attributes much of the success that has attended his efforts. Mr. Saunders believes that this action will strengthen the position of the house in the eyes of the medical profession, as it will secure a permanence of organization that will ensure the perpetuation of the business. Besides this, it will obviate the disadvantages incident to a large business that rests entirely upon the shoulders of one person, by permanently attaching to the house those whose ability and experience have contributed in bringing the business to its present state of prosperity. The Subscription and Publication Departments will be conducted as heretofore. The Trade Book Department will continue under the management of Mr. W. B. Watson.

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Favorite Prescriptions

Scrofula.—

℞ Syr. hypophosphites (McArthur's) ..... 1 bottle

Sig.: Dessertspoonful every three or four hours.

Eczema.—

℞ Salicylic acid..... 30 grn.
Zinc oxide..... 6 dr.
Starch ..... 6 dr.
Adeps lanæ..... 2 oz.

Night-Sweats of Phthisis.—Siefert's formula is:

℞ Agaricin..... gr. viiss
Dover's powder..... ʒ ij
Powdered marshmallow.....
Mucilage of acacia.....aa ʒ j

Divide into 100 pills. One or two pills in the evening.—Le Progres Medical.

Uric-acid Diathesis.—

℞ Sodium bicarbonate..... 45 grn.
Benzoic acid..... 15 grn.
Sodium phosphate..... 80 grn.
Boiling water..... 1½ fl. oz.

Dissolve and add:

Cinnamon-water..... ..... 3 fl. oz.

Two teaspoonfuls three times a day.—Med. News.

Anemia.—A correspondent of the Medical Summary writes that he has often prescribed, with generally good results in cases of anemia, or where a general so-called tonic seemed indicated or something to tone the system:

℞ Quinine mur..... ʒ ss
Ammon. chlor..... ʒ iss
Tr. ferri chlor..... ʒ ij
Syrup et aqua, of each, q. s. ad..... ʒ iv

M. Sig.: Two teaspoonfuls in water four times a day.

℞ Ferri et ammon. cit..... ʒ j
Potass. citratis..... ʒ ij
Liq. potass. arsen ..... ʒ j
Tr. nucis vom..... ʒ ij
Tr. cinchon. comp..... ʒ iv

M. Sig.: Teaspoonful in water after meals.

℞ Tr. ferri chlor..... ʒ iss
Ammon. chlor..... ʒ ss
Ac. nit. hydrochlor. dil..... ʒ j
Hydrarg. chlor. corros..... gr. j
Syr. zingiberis, q. s..... ʒ vj

M. Sig.: Teaspoonful in water three times a day.—Med. Bulletin.

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Original Department.

PAPERS for the Original department should be in hand one month in advance, and contributed to THE MEDICAL FORTNIGHTLY exclusively. A liberal number of extra copies will be furnished authors, and reprints may be obtained at reasonable rates, if request accompanies the manuscript. Engravings from photographs furnished free

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MALARIAL FEVERS.

A SYMPOSIUM.

Malaria — Sequelæ and Complications.

BY CHARLES DEWEY CENTER, M.D.

QUINCY, ILL.

THE sequelæ of malarial fever may be distinguished as the expected and the unexpected. It is difficult to draw hard and fast lines, since each case has its individual *locus minoris resistentiæ* where the strain will tell after the first burst of the malarial attack. The expected sequelæ will be modified or enhanced by the length of time the plasmodium has pursued its devastating course throughout the circulatory system, and by the degree of destruction wrought therein, by the variety of malarial parasite within the host; by the inherent powers of resistance, and the degree of physiologic elasticity possessed by the host, and by the occurrence of pathologic conditions which may have existed prior to the malarial attack, been developed by the attack, or which have come into existence subsequent to the attack, but which have no immediate connection with the attack.

The unexpected sequelæ may be anything. Splenic sarcoma is not expected as a result of malaria, but in each of the few cases I have seen of this disease there was a well-defined history of long continued malaria.

Again, many of the complications of malaria become sequelæ, hence nephritis and neuralgia may be found in either class.

In considering the sequelæ, and more particularly the expected sequelæ, the pathologic status of the red corpuscle, from the inception of the attack

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by the plasmodium must be borne in mind. The parasite inhabits the corpuscle at the expense of the life giving function and life-carrying portion of that organism. The plasmodium has the power to destroy tne hemoglobin, to convert that necessary constituent of the body into the pigment melanin good only for decorative purposes. The attack on the red corpuscle means death to it as a useful red corpuscle, and often no doubt, death as an organic structure or living cell. The destruction of the hemoglobin means cessation of the oxygenating function so far as individual corpuscle attacked is concerned, and this function in direct ratio throughout the body. This reduction means decrease in the power to continue normal life, obstruction to physiologic metabolism, and increase in pathologic metabolism.

To leave the corpuscle, and to consider the blood in its entirety we find that, according to Kirkes, among the uses of the blood corpuscles are these:

1. To be a medium for the reception and storing of matter—food, drink and oxygen—from the outer world, and its conveyance to all parts of the body.

2. To be a source whence the various tissues of the body may take the materials necessary for their nutrition and maintenance.

3. To be a medium for the absorption of refuse matters from all the tissues, and for their conveyance to those organs whose function it is to separate them and cast them out of the body.

To summarize briefly what has been said at length, the sequelæ of malarial will be those diseases arising from deficiency in oxygenation, deficiency in elimination and deficiency in nutrition, all marks of a systemic and profound toxemia. Among these diseases will be the neuralgias, herpes, urticaria, hematuria, albuminuria, all showing the disorder, or disorganization of the eliminative functions. There may also be an anemia, or a leucocythemia, the one produced directly by the parasite, the other arising, to a physiologic degree at least, through nature's effort to overcome the parasite.

There will often be gastro-enteric indigestion, emaciation, debility, ill-defined pains in body and limbs, rapid heart beat, anemic murmurs, the feeling of discomfort over a permanently enlarged spleen, pigmentation, not only of the skin, but, as shown by post-mortem examinations, of the spleen, liver, kidneys, and even of the gastric and intestinal walls, nor does it stop here, for wherever the blood-current, laden with the metamorphosed hemoglobin has gone the tissues have taken on a melanotic tinge of greater or less degree. Other sequelæ to attacks of malaria that have been noted are middle ear disease, various ocular manifestations, and typhoid fever.

The complications to an attack of malaria, as said before, may also become sequels. It is difficult to draw a mark in general practice, and say, Here a complication ends and a sequel begins.

There is no doubt that one of the most important complications is nephritis, and it is one of the most frequent as well. In 758 cases of malaria Thayer found 46.4 per cent had albuminuria, and 17½ per cent had tube

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casts. He found too that this kidney complication was more constant in cases where the crescent parasite was present. Hematuria is a complication not seldom met, although so late as the latter '80s many authors said hematuria as a complication of malaria was of rare occurrence. Dock, of Ann Arbor, and Bransford Lewis, of St. Louis, have made contributions to current literature on this subject. They, as well as others, show that malarial hematuria is much more common than usually considered.

Another very common complication is typhoid fever. I do not mean a typhoid having malarial symptoms, but a malaria which having run for a length of time has produced such a degree of systemic enfeeblement that the bacillus typhosus has found a softened, thickened and almost œdematous mucosa near the iliocecal region, and has found that the systemic resistance is almost or quite nil, so has begun his nefarious and prolonged attack. This complication may readily outlast the original disease and become a sequel.

Neuralgia, a common sequel, is often a contemporary, and in no instance is that classical definition of neuralgia, "the cry of nerves for food," more explanatory than here. The patient is deficient in his power to receive oxygen, in his desire for nutriment, in his ability to digest and assimilate, for we have shown that the stomach walls are engorged and thickened, and that the intestinal tract suffers in like manner. The supply of efficient gastric juice is diminished, the digestive ferments of the pancreas below par. The liver and spleen, two of the great reservoirs of the circulatory system are congested and blocked by debris. The cell action of the liver is hampered by the abundance of the melanin. The greatest vascular gland of the body, the spleen, among whose functions is that of furnishing leucocytes, or the scavengers for the system, is working at its topmost speed. It is hampered in this by the need of attending to another duty, that of receiving worn-out red corpuscles, either for renewal or disintegration, as the case may be. At once a workshop and a graveyard the spleen distends more and more until there results the "ague cake" of our forefathers. In a brief paper it is impossible to do more than name the sequelæ and complications of malaria. The subject is protean. With the exception of the complication typhoid, I have endeavored to avoid the mention of complications other than those due directly to the malaria. Among others still unmentioned there is the so-called bilious complication or form of malaria; the purpuric complication, and the comatose complication which is considered by at least one author as being due to the exposure of the head to the rays of the sun, thereby determining the trend of the parasites head-wards. As a more rare complication, but said by him to be malarial in its origin, St. John Roosa reports cases of acute and chronic middle-ear disease.

CHANGE IN NAME ONLY.—With the May issue, 1900, the name of the *Alabama Medical and Surgical Age* was changed to *The Alabama Medical Journal*. This change was made because it is shorter, and suits the editor and a large number of subscribers and patrons better.

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The Early Diagnosis of Pulmonary Tuberculosis.

BY GEORGE W. WEBSTER, M. D.,

CHICAGO, ILL.

Professor of Physical Diagnosis Northwestern University Medical School.

Chicago Medical Examiners Association joint meeting with Chicago Medical Society, April, 1900.

THE topic which has been assigned me by your honorable President is the most important one in the whole domain of diagnosis. If proof of this statement be needed it will be found in the following startling facts: It is estimated that there are 12,000,000 people suffering from tuberculosis in the United States today; this disease causes one death in the United States every three and a half minutes, night and day, throughout the year; causes 1⅔ times as many deaths in Chicago each year as diphtheria, smallpox, scarlet fever, measles and meningitis combined; causes more deaths in the United States in one year than were killed on both sides in the battle of Gettysburg and Waterloo; and costs the American people $750,000,000 annually.

It is more amenable to treatment in its early stages. At this time it may easily escape even fairly careful examination. As so well put by Dr. John H. Pryor, of Buffalo, "What we ask for is that the consumptive be taken care of at the right time and in the right place until he is well, and not at the wrong place and at the wrong time until he is dead." To do this a correct early diagnosis is an essential prerequisite.

In discussing the question of the early diagnosis of pulmonary tuberculosis, I shall not attempt to describe the symptoms and signs in what are commonly designated the "stages" of the disease, as such a classification is fallacious. By early recognition, I mean a positive diagnosis made at the earliest time that tubercle bacilli are found in the sputum, either by aid of the microscope or by the inoculation of animals, and a tentative probable diagnosis long before this time.

I shall also discuss the question whether an earlier diagnosis than this can be made positively, together with the methods employed. I shall first describe the clinical manifestations, including an examination of the sputum, and then any other means or methods which are available and valuable, such as the use of potassium iodide, tuberculin, the X-Ray, and the inoculation of animals.

THE FAMILY HISTORY.

The family history should be investigated carefully; not because adults ever become victims of inherited tuberculosis, but for two other reasons: First, the peculiar type of chest and tissue in which resistance is diminished and tuberculosis is likely to develop is inherited. The degree of immunity is below the average. What is inherited is rather an increased vulnerability to adverse conditions of all kinds. Second, because where there has been tuberculosis in the family, the environment has been unusually favorable for the occurrence of infection. Also inquire whether

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married, and if so whether husband or wife has had tuberculosis. Also in regard to other members of the family, or any one living in the same house.

PERSONAL HISTORY.

No age is exempt, but it is less common in the two extremes of life. I have seen it in men of 75 years of age.

The occupation should be learned. Workers in brass, flint, polishers, file cutters, potters, millers, and like occupations, furnish a large number of victims of this disease.

The habits should not be forgotten. The regular drinking of even moderate amounts of liquors increases the liability to the disease.

Grief, worry, care, great mental anxiety, frequent parturition and lactation, insufficient food, insanitary surroundings; anything which lowers the general tone and lessens resistance, invites the disease.

Previous illness should be carefully considered.

Pleurisy is often tuberculous; so also is ischiorectal abscess and anal fistula. Syphilis predisposes only in so far as it lowers vitality. Influenza, measles, whooping cough, and typhoid fever, seem to predispose to tuberculosis. Congenital stenosis of the pulmonary orifice predisposes to either to pulmonary or general tuberculosis, but this need scarcely be considered as few of these cases reach adult life. A careful inquiry should be made in regard to enlarged tonsils, and adenoid vegetations. At the same time these regions should be carefully examined.

SYMPTOMS.

The symptoms which should invariably lead to a very careful, complete examination, are malaise, sense of exhaustion with moderate exertion, loss of appetite and impaired digestion, loss in weight, slight rise in temperature in the evening, night sweats, progressive anemia, slight cyanosis of finger ends, hemoptysis, or a pulse rate which is persistently above the normal in frequency. It is the latter symptom which more than any other makes me suspicious of the existence of pulmonary tuberculosis. Every day I am more and more amazed at the number of cases which come to me for diagnosis that have been treated for "chronic grip," "chronic malaria" and "dyspepsia." These symptoms often precede the cough, sweats, bacilli in the sputum for many months. Loomis regards chloroanemia as one of the most pronounced symptoms of the pretuberculous stage of phthisis.

In regard to hemoptysis let me warn you that you should be on your guard in considering this symptom. I have seen five years elapse between the initial hemorrhage and the full development of the typical signs. My experience would lead me to say those cases in which hemorrhage is the first symptom are apt to be very slow in development. Single or repeated hemorrhages without other cause, such as mitral obstruction, ulceration of tonsils, adenoids, etc., should be put down as almost always due to tuberculosis. The graver symptoms of rapid emaciation, cough and expectoration, evidences of mixed infection or the acute cases do not belong to this discussion.

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The value or weight of any symptom depends largely on the whole clinical picture. The great fault with many physicians is that they are looking constantly for some single pathognomonic symptom, a diagnosis already spelled out by a single symbol. It is the man who can see and interpret the little symptoms, the niceties of life and shadow in the clinical picture that estimates aright the actual condition of his patient and makes an early and correct diagnosis.

GENERAL EXAMINATION.

Before beginning the examination, the patient should under ordinary circumstances be stripped to the waist. He should be weighed and a careful inquiry made as to any gain or loss in weight. The latter is suggestive. The military standard of corpulence, relation of weight to height, is found by dividing the weight into pounds by the height in feet. In France this "vital index," as it is called, is twenty-six. Loomis thinks this too high for this country and estimates it at twenty-five (*Medical Record*, December 10, 1898,) for males and twenty-three for females, quoting Bouchard as authority for the latter figure.

Inspection: The general nutrition may be good, fair or impairing, depending on the lapse of time since the infection and the mode of life and the hygienic surroundings.

The color may be good, or the skin may be unusually pale with slight flush of the cheek, and there may be faint signs of cyanosis. There may be undue moisture of the skin and it may be warm enough to indicate slight elevation of temperature. In another class of cases, the skin instead of being thin, delicate and pink, is thick, muddy, oily. Bronzing may take place just as in Addison's disease, but this is rare and not often an early sign.

In children and young people, the skin may be covered by a growth of very fine or downy hair. The hands may be normal in every respect. In others there is slight cyanosis, noticed especially under the nails, and, in late cases which have pursued a chronic course, there may be some "clubbing" of the finger ends when aeration of blood has been deficient for some time. The hand may present the long, slim, tapering fingers which go with the "alar" chest, or they may be normal in every way. The pupils are usually dilated, and this has been described as one of the earliest signs of tuberculosis.

The chest may be of the "alar" or "pterygoid" type of Galen, with the long neck, sloping shoulders and wing-like projection of the scapulæ, or it may be normal in contour.

Mensuration: The thoracic perimeter is obtained by adding the circumference during forced inspiration to that of forced expiration, and dividing by 2. It should never be lower than one-half the height of the individual.

The respiratory movements should be very carefully inspected for frequency and character, and any want of congruous movement carefully noted. It is still a matter of surprise to me how frequently and how early that slight lagging of the affected side is to be observed sometimes, in the female, rather early in the case, the superior costal type of the respiratory

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movement is modified so as to resemble more nearly the abdominal type of the male.

Respiratory expansion is almost invariably diminished early in the disease, and the movements become more and more impeded as the case progresses. It is at this time that the "lagging" is more readily observed. Of course I am now considering the usual case without regard to irregular forms and anomalous distribution of signs. Want of symmetry of form is not one of the earliest signs, but as the case progresses there may be noticeable disparity between the two sides in the infraclavicular region, partly from impeded movement on one side and the compensatory activity on the other. The index of vitality, or the proportion of circumference to the height as well as relative expansion, is inferior in the tuberculous, and when found the individual is a poorer risk from the standpoint of the life-insurance examiner. Disability is thus revealed in physical peculiarities.

Circulatory System: It is well to examine the circulatory system, before proceeding to the examination of the respiratory system. The heart may be congenitally small, the blood vessels correspondingly small and its nutritional possibilities thus limited. The impulse is feeble, the sounds usually sharp and valvular in character, and it is seldom that there is much of the muscular element in the first tone. The pulmonic second may be accentuated rather early in the disease.

This characteristic and diagnostic features are character of the pulse and the sphygmographic tracing; the pulse is small, the pressure is low and the frequency increased. It is this persistent cardiac erethism which more than any other single sign makes me suspicious of the existence of tuberculosis. It is present very early in the disease, I believe in all cases before the tubercle bacilli are to be found in the sputum. Let me digress far enough to enter a protest here against the use of the term tachycardia to designate this persistent increase in the pulse rate. It is odious, misleading and pedantic. The pulse tracing accords well with the character of the pulse and by some is considered diagnostic. As the blood pressure is high in ordinary anemia, and low in tuberculosis, the association of low pressure with anemia would speak for tuberculosis.

In regard to the characteristic features of the pulse in early pulmonary tuberculosis, Dr. Edward F. Wells says, *Med. News*, September 21, 1893: "A study of the pulse will afford some of the earliest indications of the existence of pulmonary tuberculosis. From the start, the characteristics of the pulse are changed from the normal. Usually the pulse is accelerated and the rate modified very little by position.

"The latter feature is very suggestive, and whenever the pulse rate is found to be practically the same whether the patient be lying, sitting or standing, the most careful scrutiny is demanded. It is, however, from the sphygmographic tracings that we obtain the most valuable aid from the pulse in the diagnosis of early pulmonary tuberculosis. From this alone in the great majority of cases, may be confidently predicted the presence or absence of tuberculosis in a doubtful case."

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THE PHYSICAL EXAMINATION.

As a preliminary to the physical examination, I crave your indulgence while I call your attention to the following facts well known to all of you, but so important as to bear repetition.

First, on account of the size and direction of the right bronchus, there is a normal disparity between the two sides of the chest. In the right infraclavicular space and above the scapula behind, the percussion note is slightly higher in pitch than on the left side. On auscultation, the respiratory murmur is more intense, slightly harsher in quality and higher in pitch. On auscultation of the voice the intensity is relatively greater on the right than on the left side. This normal disparity is of the utmost value in arriving at a conclusion. If the two sides are alike or there is even the slightest difference in favor of the left side, then a pathological condition is probably present in the left side. The degree of disparity varies in different persons.

Second, the initial pulmonary lesion is usually found just below the summit of the apex, in that part of the lung area supplied by the bronchial branch known as the ramus apicalis posterior. Both this and the bronchus supplying it are not as well developed as the other parts of the lung, and its respiratory movements are feeble. (Birch-Hirschfield, *Deutsche Archiv. fuer klin. Medicin*, 1899) Bovaird claims (*N. Y. Medical Journal*, July 1, 1899) that the primary lesion, in children at least, is to be found in bronchial lymph nodes. It may be found in some region other than the one mentioned. The initial lesion in the lung consists at first of one or more small nodules. There is a lobular consolidation in which area there is a localized bronchitis; there is a small circumscribed area of bronchopneumonic lung, surrounded on all sides by normal lung. In some cases, according to Birch-Hirschfield (*Deutsche Archiv fuer klin. Med.* 1899), it sometimes begins as a subepithelial tuberculous infiltration of the mucous membrane of tubes of medium calibre. The peribronchial tissue is secondarily involved, the lumen of the bronchus becomes narrowed and the corresponding part of the lung may collapse.

In the former case, the moment one of the nodules becomes softened and broken down, then excavated, in the pathological sense has begun and tubercle bacilli may be thus found in the sputum very early. There are no physical signs which indicate softening, and at this time no clinical, physical signs of excavation, but the elastic fibres and tubercle bacilli demonstrate that excavation in the pathological sense is present.

The effect of these bronchopneumonic areas is to first cause relaxation of the surrounding lung, and second, give rise to the characteristic physical signs of a sharply localized bronchitis with its subcrepitant rales.

Palpation serves to confirm the findings of inspection and perhaps to extend them. Any "lagging" will be detected. Want of respiratory expansion will be noted and estimated. Fremitus if anywhere increased will be detected and its location noted.

Percussion: To the novice in the art of percussion, as well as to the man of greater experience who is not perfectly familiar with the physical

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changes induced by relaxation of the lung and the physical signs which are its exponents, this method of examination is often unsatisfactory and even misleading. Many men describe dullness on percussion, with necessary consequent rise in pitch, as the earliest percussion evidence of localized beginning tuberculosis of the apex. I have never found it so.

The effect of these bronchopneumonic areas is, of course, to lessen the air in these small areas themselves, and this, of course, would, at least theoretically, tend to raise the pitch and diminish the resonance, but they are small, deeply situated and the principal effect is to cause relaxation of the surrounding healthy lung, the percussion note of which, in consequence becomes hyperresonant or even slightly tympanitic in quality, "skodaic resonance." Therefore, if these cases are seen early the percussion note instead of being dull in skodaic. Later in the progress of the case, as the consolidation increases in degree and extent, the quality changes, the resonance diminishes, the pitch rises, until dullness or even flatness may be reached, when consolidation is now complete. We now proceed by comparing symmetrical points on the two sides until all of both lungs have been carefully examined.

Auscultation: This method of examination, together with auscultation of the voice, furnishes us with the most important and reliable of all the evidence on which a diagnosis is based; and not less important than auscultation is the method of performing it. We should first listen to the sounds as the patient breathes normally, noting the relative length of the inspiratory and expiratory movements and of the inspiratory and expiratory sounds, remembering that in the former the relationship is as 6 to 7, and the latter as 10 to 2.

We should next note the relative intensity of the inspiratory and the expiratory murmur, remembering that the pitch of the latter is lower than the former, and also bearing in mind the normal disparity of the two sides as already described.

The patient should next be directed to take deep inspirations, the examiner listening meanwhile. This is very important, as the intensity of the respiratory sounds depends upon the activity of the respiratory act.

The earliest respiratory sign of beginning tuberculosis is enfeebled breath sounds, or a slightly roughened, harsh respiratory murmur, audible during expiration; or, the expiratory sound slightly prolonged. This slight increase in the relative length of the expiratory murmur may be the only sign at first, and may have not the slightest suspicion of a tubular quality, but is slightly increased in intensity. As the case progresses the quality becomes harsher and, ultimately, coincident with consolidation, it acquires a bronchovesicular, and later a bronchial or tubular quality. As the pathological condition is one of localized broncho-pneumonia, the accessory signs of this condition will be present. These are subcrepitant rales due to the bronchitis, and the crackling rales. The latter, like the crepitant rale of pneumonia, is heard only during inspiration, and usually at the end of the inspiratory act. It often differs from the crepitant rale of pneumonia only in the number of crackles coming to the ear in a unit of time, or during a single inspiration. At other times it acquires more of a squeaking quality,

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and at others seems larger in size. Both these signs may precede the appearance of tubercle bacilli in the sputum. The meaning of a slight localized bronchitis which is persistent should never be misinterpreted. It nearly always means a beginning tuberculosis, no matter whether the initial lesion consisted on multiple nodules or a subepithelial infiltration of the mucous membrane.

Auscultation of the cough is another means of securing violent respiratory movements which increase the intensity of the respiratory sounds.

Ascultation of the voice is of great value in confirming the findings of percussion and ascultation. In any area in which there is the slightest rise in pitch due to consolidation, and where rales are even slight, these findings will be amply confirmed by the increase in intensity of the vocal resonance. This differs in no respect from normal resonance except in intensity. As the consolidation increases the intensity becomes augmented and ultimately the increased resonance is replaced by bronchophony, characterized by high pitch, concentration and nearness to the ear, the intensity in some cases not above the normal; while the normal vocal resonance is low in pitch, diffuse and distant. This method is of far greater value than is generally recognized by the general practitioner or insurance examiner, and should always be used as a routine method in all examinations of the chest. It will readily reveal degrees of consolidation that cannot be detected by percussion even by an expert. It is both delicate and trustworthy.

In the description of signs it has been assumed that the lesion is confined to one apex. This is usually the case. Anomalous distribution of signs may occur. The same signs may be found at the base instead of the apex. Sometimes it happens that the lesion is at the base, or at the apex or one of the lower lobes, or along the interlobar incisure under the margin of the scapula. All this simply gives emphasis to the advice to in all cases examine the whole of both lungs. It sometimes happens that even though the dominant signs may be in some region other than the apex, an old lesion will be found in the latter if very careful search is made for it.

The very careful and even repeated examinations of the sputum may be necessary to settle the question. Then, too, in bronchitis and even in emphysema there may be a secondary infection and tubercle bacilli may be found in the sputum.

The temperature is one of the most reliable guides. In all doubtful cases it should be carefully taken, at least four times in the day and for several successive days. When the temperature is persistently above the normal, especially in the evening, it deservedly arises above the dignity of a mere suspicion.

THE SPUTUM

should now be examined. A morning specimen should be selected. It should be spread on a block of black glass and the small opaque specks and curdy masses selected, and then smeared on the cover glass, stained, counterstained and mounted in the usual manner and carefully examined.

If the first slide is negative, then several should be examined, and even the sputum of several successive days. In any case in which tuber-

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cle bacilli are found in the sputum, there is no excuse for not making a correct diagnosis, but here, as in the physical examination, aside from life insurance examinations, more mistakes are made from want of examination than from want of knowledge.

In any case in which symptoms and signs indicate a probable tuberculosis, and in which the bacilli cannot be found in the sputum, we should resort to the inoculation of guinea pigs. .5 to 1.5 c.c. should be injected into the peritoneal cavity, and the animal killed in about four weeks and examined. E. Levy and H. Bruns (*Deutsche Med. Woch.*, March 1, 1900), recommend that the sputum be heated to 60 degrees C. for ten minutes in order to destroy other micro-organisms. This might easily lead to error as Dr. Theobald Smith has shown (*Journal of Experimental Medicine*, 1899, p. 219), that the thermal death point for tubercle bacilli is 15 to 20 minutes at 60 degrees C.

Having completed the clinical and microscopical examination, and even the inoculation of animals, have we exhausted our resources? Fortunately we have not. I believe that in almost all cases of pulmonary tuberculosis, where the examination has been made as outlined, and by a man who is competent to observe, classify and interpret all of the symptoms and signs in the case, a correct diagnosis will be made without an appeal to other methods. In a few cases doubts and uncertainty will arise.

THE SERUM TEST.

To what other courts may we now appeal? The first one is the serum test. Mongour and Buard (*Journal of the American Medical Association*, January 21, 1899, p. 130) obtained a positive serum action in four cases of tuberculous pleurisy, and in nine cases of pulmonary tuberculosis, and detected latent tuberculosis in twenty other cases. We can only say that the value of the serum test is as yet not fully determined.

Dr. Murat (*N. Y. Medical Journal*, May, 1899) directs attention to what he calls a new sign of tuberculosis. This consists of a subjective sensation of vibration in the affected apex on loud speaking. I have been able to confirm this sign in cases far enough advanced to cause consolidation, thus facilitating conduction of vibrations, but at this stage it is not needed. I failed to obtain it in the earliest cases.

THE X-RAY.

The X-ray has its advocates as a valuable means of early diagnosis, but the cost of the necessary apparatus, together with the high degree of technical skill required, will serve to limit its value which has not yet been satisfactorily demonstrated.

THE IODIDE OF POTASH TEST

Is one of considerable value. In those cases in which there are very faint physical signs and an absence of even the amount of sputum necessary for a microscopical examination, or where we desire to determine the location and extent of the tuberculous process, the method offers many advantages.

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Before the Chicago Society of Internal Medicine, December 22, 1898, Dr. Edward F. Wells read a valuable paper on the value of iodide of potassium in locating the lesion of pulmonary tuberculosis, as first suggested by Stricker.

Its value is owing to the fact that when iodid is administered it is partly eliminated by the bronchial mucous membrane, increasing the bronchial mucus chiefly by the addition of water, thus causing the development of rales or the accentuation of those scarcely audible before. (*Jour. A. M. A.*, February 4, 1899.)

He says, "Generally speaking, it may be affirmed that in these cases in which tuberculous is proven to exist, but with inability to locate the lesion, the locality and extent of the affected area may be made evident by the development of rales; that in cases with rales and an apparent inability to demonstrate the extent of the local involvement, the observer will be gratified with the clearness of the auscultatory evidence and astonished at the revealed extent of the deposit, and that in cases of suspected tuberculosis rales and bacilliary expectorate may be obtained earlier than is possible by any other means." In conclusion he says: "I believe that the iodide of potassium test, as described, is free from danger and serious objections; that it lends itself readily to the exigencies of routine practice; that in the early pulmonary tuberculosis and in defining the location and extent of the lesion it is a useful addition to our diagnostic resources." The iodide should be given in doses of three grains, three times a day, for two or three days.

In all this I heartily concur. I have used the iodide as here recommended in quite a number of cases, and in nearly all a characteristic reaction occurred, without any untoward results.

This method has been criticized, but, so far as I have been able to learn, the objection was purely theoretical.

THE TUBERCULIN TEST.

This method has warm advocates as well as strong opponents. The latter allege unreliability, reaction in other diseases, notably syphilis; no reaction in cases of undoubted tuberculosis.

Its advocates assert that it is safe, delicate, reliable and that, in very many cases, and this applies, perhaps, with more force to tuberculous lesions other than pulmonary, it furnishes us with a reliable, safe means of making an absolute diagnosis. On account of the discordant opinions, and in view of the importance of the subject, besides looking over the literature at my command, I addressed a personal letter to many of the eminent pathologists and teachers of this country and Canada, and I wish to here acknowledge my indebtedness to them for their prompt replies.

I have gone into this question because of the fact that I have been criticised for using it, because of the differences of opinion regarding its use, and because its use as a routine measure has been recommended (B. Van Sweringen, *Med. Examiner*, April, 1899) as a test for diagnostic purposes in life insurance examinations. The important questions at issue are its safety, reliability and necessity, and the proper method of administration.

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Dr. C. P. Ambler, of Asheville, says (*N. Y. Medical Journal*, February 12, 1898): "Such a method will do for cattle. It is like hunting for a gas leak with a lighted candle."

Dr. S. A. Knopf ("Prophylaxis and Treatment of Pulmonary Tuberculosis," p. 286) says that he, for one, dares to question the wisdom of using tuberculin as a diagnostic agent. He says five or ten milligrammes may cause an unexpected generalization with a fatal result. No one would dare to advise against the use of morphine because ten or twenty times the normal dose may be dangerous, and the dose he mentioned is certainly ten to twenty times the initial dose which is advised by conservative users of tuberculin.

Dr. J. B. Murphy, of Chicago, says: "I rarely find it necessary to use tuberculin. It has elements of danger."

Dr. N. Senn, of Chicago, says: "I believe the use of tuberculin as a diagnostic resource is hazardous, as it always aggravates the existing conditions."

Dr. Gustave Futterer, of Chicago, says (personal communication): "In answer to your question about tuberculin, I would that I should not recommend it as a means for diagnosing the disease in man, as the question whether it may cause a spreading of the tuberculous process has not been decided. If it is used, then doses ranging from one-half to three milligrammes are apt to give the best results and are least objectionable. Smaller doses than half a milligramme cannot be relied upon to induce a reaction, and three milligrammes will cause no reaction in healthy individuals."

Dr. Frank S. Johnson, of Chicago, says: "I have never used Koch's tuberculin, because of the suspicion that it may carry virulent tubercle bacilli, and itself cause the disease."

Dr. Christian Fenger says: "There is danger of reviving a half-way encapsulated tuberculosis."

Dr. Hobart A. Hare, of Philadelphia, says: "In reply to you letter of March 15th, in regard to the use of tuberculin, let me express my views as follows—premising it, however, with the statement that I do not speak from personal experience with tuberculin:

"I have never used tuberculin for the purpose of making a diagnosis as to the presence of the tubercular infection in the human being for several reasons. First, because I think in the majority of cases it is perfectly possible to make such a diagnosis without the use of this agent which, in its methods of preparation and its effect upon the human body, is somewhat uncertain. Second, given a case in which the symptoms of tuberculosis are so indefinite for physical reasons that a diagnosis solely upon the reaction which the tuberculin produced in the patient. Third, in certain cases, as far as I have been able to learn, which have mild tubercular infection, the injection of tuberculin produces such grave systemic disturbance that it would seem to me that the knowledge of tubercular infection gained by its use was not of sufficient value to justify us even in temporarily making the patient seriously ill, or any worse than he was when he first presented himself to use for diagnostic purposes. In other words, I think that the

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average patient, in whom we suspect tuberculosis, would better be closely watched for physical signs and other objective and subjective symptoms, and believe that if this is done a diagnosis can usually be made early enough to give him the benefit of an early diagnosis, and thereby avoid any possible danger or disagreeable result which may follow the injection of tuberculin. In other words, if a case presented itself to me with symptoms which were somewhat suggestive of tubercular infection, I prefer keeping the patient under close observation for a few days or a few weeks, rather than immediately come to a conclusion by the injection of this substance"

Dr. Robert H. Babcock, of Chicago, says: "In reply to your inquiry concerning my opinion of the danger of tuberculin for diagnostic purposes, I desire to say I believe the test uninjurious if the tuberculin be given in the proper dose or doses, and with an interval of several days between the injections. I have used it a number of times."

Dr. John A. Robison, of Chicago, says: "Your question, I presume, is based on the supposition that the resort to Koch's tuberculin is the final test where tuberculosis is suspected, but is not demonstrable by the other methods of diagnosis.

"In such cases I believe its use is justifiable, and not objectionable, provided that the same conditions which exist in cattle non-tubercular in character, and yet capable of producing a reaction, are eliminated.

"It must be borne in mind that the demonstration of the existence of bovine tuberculosis means, generally, the destruction of the affected animals; whereas, in the human it would mean the early diagnosis of the disease and the prolongation of the life of the victim; therefore, a reaction to tuberculin should be regarded as corroboratory evidence of the existence of tuberculosis.

"I do not believe that there is any danger in its us if the precautions necessary are used. As I understand its action, there is no danger of infecting patients with tuberculosis, as the tubercle bacilli have been eliminated, and the tubercle is the bacillary ptomaine, and the reaction is the result of ptomaine poisoning."

Surgeon-General Geo. M, Sternberg, Washington, D. C., says: "In reply to your letter of March 15th, I would say that so far as I am informed there is no danger in the proper use of tuberculin as a diagnostic means in cases of suspected pulmonary tuberculosis."

Dr. J. H. Musser, of Philadelphia, says: "I do not know of any objection to, or danger in, the use of Koch's tuberculin as a diagnostic means in cases of suspected pulmonary tuberculosis, provided that the method is done properly and the proper preparation is selected. I regret very much that I have not used it more frequently than I have, so that I could give you very positive data from personal experience. I have used it, however, quite enough to know that there is no danger attendant upon its use."

Dr. Wm. H. Welch of Johns Hopkins University says: "I think that the possible danger of the diagnostic use of Koch's tuberculin can be determined only by clinical experience. I am not engaged in practice, and, therefore, do not feel competent to answer your question. I would refer you especially to Dr. E. L. Trudeau, Saranac Lake, N. Y."

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Dr. Alfred Stengel, of Philadelphia, says: "In answer to your letter regarding the use of Koch's tuberculin, I would say that I am not in the habit of using it for diagnostic purposes, and believe that in small doses there is no danger in its use."

Dr. Frank Billings, of Chicago, says: "I have never seen any harmful effects from the use of Koch's tuberculin used for diagnostic purposes, and therefore should consider its use without danger to the patient, provided a good preparation of tuberculin is always used."

Dr. W. A. Evans, of Chicago, says: "Your question is, Is there any objection to, or danger in the use of Koch's tuberculin as a diagnostic means in cases of suspected pulmonary tuberculosis? There could be but two adequate objections—the one the incompetence of the test, the other its dangers. The percentage of error in this test is less than any other diagnostic means of which I know. I regard the danger as so slight that the end justifies the means. These are my opinions, based upon my own rather limited experience and my estimate of experiences found in the literature"

Dr. George J. Adami, of Montreal, Canada, says: "I have just this moment returned from Saranac and opened your letter, and oddly enough, on Saturday last, I had a long talk with Trudeau over the subject of your query, Trudeau having asked me the very same question. I don't believe there is any objection to or danger in the use of the old tuberculin, though there is with tr. tuberculin, provided the minimal doses be employed—just sufficient to produce a definite action. So far as I can understand, they undoubtedly in Berlin did at first have not a few cases in which, following upon the use, a rapid generalization of the process developed, but this was when they employed a dose which was based upon the amount of tuberculin necessary to cause a reaction in a guinea-pig—a dose which was relatively huge.

According to Koch's theory or explanation that tuberculin sets up a localized necrotic process, it is difficult to understand such generalization; according to Metchnikoff and the French explanation, it is comparatively easy, the theory, namely, that tuberculin produces an increased local reaction on the part of the organism with increased determination of blood to the part and increased migration of leucocytes. If there be such increased migration of leucocytes to the part there may also be an increased passage away of the same bearing with them the living tubercle bacilli whereby the process is disseminated and generalized.

The dose employed by Trudeau and following his advice by Dr. O. F. Martin, Dr. F. G. Finley and Dr. H. A. La Fleur, here in Montreal, is a minimal dose beginning with 0.5 mmg., and if this does not cause reaction, being increased every three or four days up to at most four or rarely five mmg. You will, however, see the mode here employed in Dr. Martin's paper, published in the *British Medical Journal* at the end of 1897, or beginning of 1898. So far there has been no case which has manifested any symptoms which could be put down to generalization of the disease as a consequence of use of the medium. Nay, more, my experiments upon cattle have led me to think that certain phenomena seen in them can only be

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explained by the direct curative action of the tuberculin; animals which have shown no physical signs and have appeared to be in thoroughly good health and which nevertheless have given well marked tuberculin reactions, have after two or three days completely failed to react and upon making autopsies on these animals some six or seven months later, the signs of disease have only been discovered with difficulty in the peribronchial glands for example, and there the foci have been well encapsulated." E. L. Trudeau says (*Bulletin Johns Hopkins Hospital*, Vol. X, No. 100), "Tuberculin is a most searching, delicate test and safe in the incipient cases. There is no proof that it causes scattering of the bacilli, or that new foci are produced."

And again (*International Medical Magazine*, March, 1900, p. 214): "In my experience, the tuberculin test, when applied to cases of suspected incipient tuberculosis where the diagnosis cannot be made by the ordinary methods has proved generally reliable, and has given positive information which could not be produced in any other way. From the evidence obtained by others, and from my experience, I would say that it is very generally correct. Before condemning it as unreliable in any case, it must be remembered that latent tuberculosis of so moderate an extent as not to give any positive symptoms probably exists in about thirty per cent of individuals who have no reasons to suspect its presence. It should also be remembered that susceptibility to tuberculin varies in individuals, and that no stated dose can be relied upon to produce reaction in every case, one reacting readily to one milligramme, and another requiring five, seven, or even eight before reaction occurs, and that the various samples of tuberculin differ somewhat in strength. Also that occasionally advanced and recognized cases of the disease do not react, either on account of an individual habitation to the toxin, or owing to the profound cachexia of the individual, or to the fibrous state of the lesions, which hinders the local reaction by interfering with the circulation around the tuberculous tissue. But little account, however, need be taken by these latter peculiarities, as the test should not be applied to such cases, since the diagnosis can be made easily by the usual methods.

"As to its safety, very little evidence can be found in the literature of the subject, demonstrating that it is capable of scattering the bacilli through the body, or of producing a permanent and increased activity on the part of the disease. No experimental evidence with which I am acquainted has been forthcoming to prove the danger of the test, either in aggravating the disease or in scattering the bacilli to distant points."

Dr. Joseph McFarland says (International Medical Magazine, March, 1900, p. 169):

"The histologic changes caused by tuberculin injections were observed by Virchow, who began to oppose the clinical use or the substance almost as soon as it was suggested, arguing that this hyperemia, by producing maceration and softening of the tubercles, might easily be the cause of the liberation of the tubercle bacilli from tubercles in progress of recovery, or might greatly facilitate the spread of the disease in ordinary cases, thus hastening the fatal termination. This opinion Virchow was able to support

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by such a mass of evidence collected upon his own and other autopsy tables that the clinical use of the preparation was ultimately almost universally abandoned for diagnosis as well as treatment. It is now being revived for diagnostic purposes in doses varying from one-half to three milligrammes. A rise of two degrees is regarded as characteristic of tuberculosis. The reaction, however, depends upon the conditions described and is in my judgment detrimental to the patient."

Dr. Boardman Reed, of Philadelphia, says (International Medical Magazine, March, 1900, p. 199):

"It is so transcendently important to ascertain at once whether tuberculosis is present or not, that the time has now come when the one practically certain test for it should be resorted to in all cases at least in which the question cannot otherwise be positively determined. I allude to the tuberculin test, which, with the proper care and precautions, is quite as safe as the old therapeutic test for malaria, by giving full doses of quinin, and much safer for weak patients than that of syphilis, by noting the effect of large doses of iodid of potassium. Prof. Kyle, in his talk on laryngeal tuberculosis in this issue of the International, describes the method and dosage in which tuberculin is best employed for this purpose.

"Dr. James T. Whittaker, of Cincinnati, in the able and exhaustive article on Tuberculosis contributed by him to Wilson's 'American Text-Book of Applied Therapeutics' in 1896, stated that he had then been using tuberculin for three years, and agreed with the statements of Klein that in minute doses it was 'absolutely unattended with any bad effects.'"

Dr. Braden Kyle, of Philadelphia, says (International Medical Magazine, March, 1900, p. 205):

"From a diagnostic standpoint the tuberculin test may be used, but should be used with great care. The test, as advised by Denison, of Denver, Colo., is as safe as any; he advises that a one per cent dilution be prepared of Koch's original tuberculin in a .75 per cent watery solution of carbolic acid. Of this .10 to .20 c.c., about one and one-half to three minims, and equal to one to two milligrammes of tuberculin, according to the age and strength of the patient, may be injected hypodermically, and if no reaction should occur, as shown by an increase of temperature above that observed for several days previously, along with increased cough, prostration or other temporary marked disturbance of the system, double the dose may be injected the next day. If still no reaction, the dose may again be doubled the third day. In tubercular cases a second dose of three to four milligrammes will produce a distinct reaction. The most experienced in this method claim that except in very large persons, or those of insensitive temperament, when a larger dosage may be safely ventured upon, the use of eight to ten milligrammes in all, injected within two or three consecutive days, will be decisive. It has been said that a reaction is possible, also, in the case of syphilis, but the administration of a few full doses of iodid of potassium would settle any doubt as to the diagnosis between tuberculosis and syphilis, causing marked aggravation in case of the former and a beginning improvement if the latter should be present."

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In regard to its reliability, Dr. A. E. Wright, of Dublin, reports as follows (British Med. Journal, February 5, 1898):

	Cases	Reacted	Failed
Finkler	73	71	2
Senator	46	46	0
Frendelenberg	90	89	1

L. Brieger and F. Neufeldt says (Deutsche Med. Wochenschrift, February 8, 1900):

"Whenever repeated examinations leave the diagnosis uncertain, recourse should be had to the tuberculin test, which is positive, and at the same time free from danger."

N. Beck, of Berlin, report (abstract in Philadelphia Medical Journal, April 8, 1899, p. 766) 2,500 cases tested, with positive reaction in 1,525, and says that in 1154 of these cases the diagnosis could not have been otherwise made. Beck, therefore, concludes that tuberculin is the most valuable diagnostic means for recognizing tuberculosis.

The weight of evidence would seem to justify the statement that it is not often necessary where the examination is carefully made by a skilled examiner. The lower the degree of skill in making the examinations and recognizing the finer and earlier signs, and correctly interpreting them the greater will be the demand for some means of spelling out a diagnosis by some other easier method. Cases will occasionally arise where a correct diagnosis can only be made tentatively, and where an immediate diagnosis is demanded. In these cases tuberculin may be used, and is safe and reliable. The first dose should not exceed a half milligramme, and three days should elapse before the second dose, which should consist of one milligramme.

A third dose of three milligrammes may be given if there is no reaction to either the first or the second dose. The characteristic reaction of from one to two degrees F. occurs in from eight to twelve hours after the injection. A temperature chart should be made for two or three days preceding the administration of the tuberculin. Larger doses may be required in some cases, but should always be preceded by the smaller ones.

CONCLUSIONS.

1. There seems to be no agreement or understanding as to what constitutes the "pretubercular" stage, or what is meant by this term. Does it apply to that syndrome of symptoms which arise after infection has taken place; or, to that condition in which vulnerability is increased, the degree of immunity lessened, whether from hereditary predisposition or the effect of disease, unsanitary surroundings, bad habits, impaired nutrition, etc. This may seem a nice distinction, and yet such a discrimination must be made. In the former, any characteristic phenomena are symptoms of tuberculosis; and in the latter they are simply those of other diseases, types, etc., which should warn us that in these cases tuberculosis is especially likely to develop. To speak of such phenomena as pretubercular in the sense that they all make up a symptom group indicating that tuberculous infection has already occurred, is absurd. To speak of it as a "stage" of a disease, before the infection has occurred, is equally ridiculous.

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2. We should be able to recognize definitely those cases in which there is that form of chest and type of tissue, together with low vital index, lessened vital capacity, diminished respiratory expansion, perimeter below the normal, corpulence below standard, in which tuberculosis is very likely to develop. This should never be designated the pretubercular stage of tuberculosis.

3. We should also be able to recognize the probable occurrence of infection by the malaise, gradual loss in weight, sense of fatigue upon slight exertion, digestive disturbances, hacking cough, occurrence of single or repeated hemorrhages, night sweats, increased frequency of low tension pulse, slight evening rise of temperature. In these cases the finding of a slight, localized bronchitis in one apex, or the slight, early auscultatory signs alluded to, ought to enable us to make a correct, positive diagnosis, whether the tubercle bacilli are found in the sputum or not.

4. When the tubercle bacilli are present in the sputum there is no excuse for not making an absolute diagnosis.

5. In doubtful cases the iodid test, and the tuberculin test, may be resorted to with confidence in their safety, efficacy and reliability.

6. But, gentlemen, while we should, and do, welcome every new symptom, sign and method, and while we hail with joy every ray of new or additional light which will enable us the better to read the symbolical language of disease aright, interpret the "handwriting on the wall," the great need of the hour is for men well trained in correct clinical methods, and in the art and science of physical diagnosis, rather than the addition of new methods.—*Chicago Medical Recorder.*

70 State street.

Acute Articular Rheumatism.— The following prescription may be employed:

℞ Acidi salicylici..... gr. x-xx
Ferri pyrophosphatis..... gr. v
Sodii phosphatis (crys.)..... gr. l
Aquæ..... ℥ ss
M. Sig: At a dose.

℞ Lithii benzoatis..... ʒ ss
Sodii bromidi.....
Potassii carbonatis (pura).....aa ʒ ij
Potassii acetatis..... ℥ iss
Sodii phosphatis..... ℥ ss
Syrupi zingiberis.....
Aquæ menthæ pip.....aa ad ℥ vj
M. Sig.: Two teaspoonfuls to a tablespoonful in a half-glass of water, every four or six hours, after food.—*J. A. M. A.*

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Reports on Progress.

COMPRISING THE REGULAR CONTRIBUTORS OF THE FORTNIGHTLY DEPARTMENT STAFF

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LONDON CORRESPONDENT — R. T. Hewlettt, M. D., M. R. C. P., Chief Bacteriological Laboratory, Jenner Institute of Preventive Medicine, London.

MEDICINE.

BY FRANK PARSONS NORBURY, M. D.

Formerly Resident Physician Pennsylvania Institution for Feeble-Minded Children; Formerly Assistant Physician Illinois Central Hospital for the Insane; Physician to Oak Lawn Sanitorium and Passavant Memorial Hospital; Neurologist to Our Savior's Hospital; Lecturer Psycho-Physics, Illinois College.

AND EGBERT W. FELL, B. S..

JACKSONVILLE, ILL.

The Contagiousness of Pulmonary Consumption.—(Shurly, *Phys. and Surgeon*, Dec., 1899.) Tuberculosis is considered by many observers to be contagious. The author thinks that, although the tubercule bacillus is an important factor in a large majority of cases of pulmonary consumption, other organisms, such as the streptococcus, staphylococcus and pneumococcus may play the greatest part in most cases, and that a predisposition to the disease must exist. Although the disease may be transmitted by the inhalation of dried sputum to animals which have a tendency for it and are in an unhealthy condition, the attempt often fails in those in good health and the best sanitary environment. There is not an instance based upon unmistakable evidence, of a case of human pulmonary tuberculosis having originated, under ordinary natural circumstances from the inhalation of dried sputum in the air. The existence of a hereditary tendency to the disease is a very important factor. Until we have more unmistakable evidence we cannot formulate a principle upon which to decide whether consumption is contagious in the ordinary sense of the term; and until this has been shown, we have no right to deprive patients of their natural rights.

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The Cacodylates in Tuberculosis.—A. Gautier (*Proge's Medical*, p. 392, 1899) prefers the cacodylates of sodium and calcium in five to fifteen centigram doses by the hypodermic method. By the mouth or rectum it may cause gastric disturbance and sometimes albuminura. The following formula is used: Sodium cacodylate, 6.04 grammes; carbolated alcohol, 10 drops; distilled water, 100 grammes. Heat to boiling in a porcelain dish. Add distilled water q. s. 100 grammes. Each c. c. corresponds to five centigrammes of pure cacodylic acid. The medicine should be stopped on the appearance of congestive tendencies, hemorrhages or the menstral period. —From abstract in *Medical Age*.

Tuberculosis of the Peritoneum.—(Wyman, *Phys. and Sur.*, Dec. 1899.) —After pain in the abdomen for several weeks, a serous fluid fills the spaces of the peritoneal cavity. During this time there is constant and progressive failure of the general health, and although the temperature is not always abnormal, the digestive functions and sleep are likely to be seriously disturbed. The leading feature in the author's cases was the ascites, which could not be accounted for by disease of the heart, liver or kidney. It may be free in the cavity or limited by inflammatory products. In another type of cases there is no ascites, adhesions forming between the bum-tarrum and intestine. The author thinks that tuberculous peritonitis is a sequel to peritonitis, resulting from other infections primarily. The treatment should be both hygienic and surgical. A cautious use of cathartics may sometimes effect a cure. Pure air and sunlight are splendid adjuvants to surgical treatment. A change of climate, habits and food is often essential to recovery.

The Bacteriology of Typhoid Fever.—(*Medical News*, Dec. 16, 1899.) The typhoid bacillus is nearly constantly present in Peyer's patches and the mesenteric lymph-nodes after the second week in the blood and spleen. It is possible to have infection without localization in Peyer's patches. The bacillus is nearly always present in the feces, and in the urine in about twenty per cent of cases. Cystitis sometimes follows typhoid fever from this cause. Pure cultures are frequently present in the gall bladder, sometimes resulting in suppurative cholecystitis, or they may remain latent for years. The bacillus can live for some time outside the body in the feces and in water, and may even multiply in milk. Infection occurs by way of the mouth from the infection of contaminated water, milk or food or from the fingers being infected from feces or urine. Immunity lasting several weeks may be produced by the injection of 5 c. c. of the serum of a well immunized horse or by small amounts of a sterilized agar culture. In the latter case there is a rise of temperature for twenty-four to thirty-six hours, the immunity being lasting, as from an attack of typhoid. It has been successfully employed in India. The Widal reaction is now employed as follows: A one-to-ten dilution of blood serum is first used, with which the typhoid reaction will be immediate and marked. If the reaction is slight, a one-to-twenty or one-to-fifty dilution should be next tried, with which a definite reaction will not occur with any but the typhoid serum. The reaction can be obtained in ninety per cent of cases; it persists several months after recovery.

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Typhoid Fever as Seen in Bellevue Hospital.—(Smith, of New York, in *Medical News* of December 9, 1899.)—Most of the cases occurred during August, September and October. One hundred and four cases are tabulated. The cause was in most cases easy to trace to the drinking water. An initial chill occurred in about half of the cases, diarrhea in 57 per cent, constipation in 20 per cent, epistasis in 41 per cent, rose spot eruption in 77 per cent. The spleen was enlarged is 77 per cent of cases. Widal's test was positive in 82 per cent, and Ehrlich diazo-reaction in 74 per cent. Albumin was present in the urine in 71 per cent. Among complications the author mentions pregnancy, pneumonia, nephritis, unilateral parotitis, laryngitis, otitis media, malaria, phlebitis and orchitis. Relapses 9 per cent; mortality 9.6 per cent. Baths were used in 48 cases. The treatment was initiated by a dose of calomel followed by a saline cathartic, repeated during the first week, if necessary; after this enemas were used. For tympanitis, salol, betà-naphthol and turpentine stupes or the cold Leiter coil; for diarrhea, bismuth subgallate. If wakefulness was a prominent symptom hypnotics were used; if accompanied by severe headache, opium. As stimulants, strychnin and caffein, and where especially indicated, whisky. Milk was the main article of diet, and was continued for eight or ten days after the temperature had touched normal.

The Treatment of Pneumonia, as Based Upon Recent Views as to Its Pathology.—Smith (*Med. News*, Dec. 16, 1899) considers only croupous pneumonia in this article. A depression favors the germination of pneumococci, whose initiation cause a fibrous exudate, emigration of leucocytes, arda diapedesis of red cells into the air vesicles. After a time an antitoxic principle is formed, the exudate is removed and the lung regains its normal condition. He says that the process is not of the nature of an inflammation in any other part of the body. The nutrient circulation is not interrupted, the exudate coming from the functional capillaries, in which the flow is finally stopped by pressure of the exudate. The symptoms are caused by the embarrassment of the respiratory function and the presence of the toxine in the blood. Since these facts have been recognized, treatment has been directed against the pneumococci and has been more successful. Calomel in large doses and quinine were formerly much used. Hare has employed quinine with aconite or veratrum viride before consolidation to abut the attack. Inhalation of chloroform is mentioned. Creosote by inhalation and by stomach has of late years given good results. When administered internally, it is eliminated by the lungs, thus the germ is attacked through the air passages and through the circulation at the same time. The author speaks favorably of large doses of sodium salicylate. Ammoniun salicylate, although not so well borne by the stomach, is more stimulating than the soda salt and is preferred by some authorities. Treatment should be begun as soon as possible, but it is never too late. The author prefers the creosote treatment. As to accessory treatment, stimulate the emunctories, support the heart and lungs and reduce the temperature. Digitalis should not be used. Serum treatment has not as yet yielded important results, but the outlook is encouraging.

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Human and Bovine Tuberculosis and Its Relation to State Medicine.—Graham (*Med. Herald*, Dec., 1899) considers first the history, morphology, methods of culture, staining, etc., of the tubercle bacillus. The remainder of his paper may be summarized as follows: The use of tuberculin is dangerous in human subjects and finds its proper sphere as a diagnostic agent in veterinary practice. Injections of thirty or forty centigrams causes a rise of temperature of from one to three degrees C. in twelve to fifteen hours after injection. This method is used by many and should be used by all state boards of health in ridding dairies of infected animals. Transmission of the disease from the mother to the fetus is possible, but seldom occurs. The most frequent channel of infection is the respriatory tract. The gastro intestinal tract is next in importance and is often infected through the ingestion of milk or poorly cooked meat from tuberculous cows. From theraputics we can expect but little; our chief hope of wiping out the disease lies in a systematic use of all practical prophylactic measures at our command. A board of health should be appointed having authority to deal with all questions of public health as they deem best.

The Seat and Development of Primary Pulmonary Tuberculosis.—Birch-Hirschfield (*Deutsch Archiv fur Klin. Med.*, Band LXIV) says that "pulmonary tuberculosis in its first stage is, as a rule, a mucous membrane tuberculosis located in a medium sized apical bronchus." The lesions are usually found in branches of the third or fourth order and from the author's studies it appears that the posterior part of the left apex constitutes the most suitable soil for the disposition of inhaled tubercle bacilli. Their retention and multiplication are favored by the deficient aeration and the accumulation of secretions in this part. The entrance of the bacilli is probably affected through erosions of the mucous membrane, previous disease not being necessary. The inflammation consists primarily in the formation of subepithelial tubercles which liquefy and form small bronchiectatic cavities. In favorable termination these areas undergo condensation and fibroid change. The cause of liquefaction is not understood, but mechanical injuries and mixed infection probably play a part. Early diagnosis is of vast importance, but cannot be made microscopically before liquefaction takes place. Physical examination often fails, and whether the X ray is of much valve remains to be shown.—From abstract in the *Univ. Medical Magazine*.

Diuretics in Renal Dropsy.—(Axtell, *Medical News*, January 20, 1900.) All diuretics should be withheld in acute nephritis until the active inflammation has subsided. In the chronic forms the saline diuretics seldom do much good, and should not be given for any length of time. Drugs which stimulate the renal cells should not be given, unless clearly indicated, and then only after diaphoretics and hydrogogue cathartics have been tried. The following are most often used: Serparius, an irritant diuretic, can be used late in any renal dropsy. It augments the urinary secretion, and sometimes the action of the bowels. Squill is contraindicated in all forms of Bright's disease. Caffeine citrate is uncertain in action, but it is sometimes serviceable in chronic nephritis. Its action is both direct and cardiac.

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Pilocarpine in one-tenth grain doses three times a day, stimulates the kidneys. Digitalis acts mainly on the circulation, but also has some direct diuretic properties It is of value in the subacute and chronic forms of renal dropsy, and although it frequently fails, should always be tried. The infusion is the best form for administration. Diuretin acts promptly and energetically by a direct effect on the searching tubules. It produces but little irritation, and may be used wherever a diuretic is demanded; it may be combined with digitalis to advantage. Calomel does not have the same good effect in renal that it has in cardiac dropsy.

Treatment of the Uric Acid Diathesis.—In Europe gout is one of the common affections encountered, but in the United States the disease is not so often met with. Yet the physician who enjoys an extensive practice will have the conviction forced upon him that the gouty condition is not nearly so rare here as we are led to believe. That is, we are constantly called upon by patients who suffer with an excess of uric acid.

Among those who lead a sedentary life, there is very probably no other cause of distress so common as uric acid excess. It is well known that a liberal diet without exercise contributes to its excessive secretion. Beer, wine and all fermented liquors are also contributary and etiological factors.

What method of treatment is employed with the greatest success in the control or cure of the uric acid diathesis? In answer I shall say that the treatment is best considered under two heads. First, dietetic; second, remedial treatment.

The dietary treatment is very important, and without giving that due attention, results will fall far below what we might otherwise have attained.

We would have our patients eat no starchy or saccharine foods—articles hard to eliminate—but they must, if indulged in at all, be used very sparingly. All fat meats should be avoided. The excessive eating of any kind of meat can but be injurious. Beer, wine or whiskey must be eliminated from the dietary. If, however, in any particular case we should have to administer any stimulant, whiskey is the least injurious. Sweet fruits and berries are also to be avoided.

The diet should consist of green vegetables, lean meat, fish and milk. Oranges are the only sweet fruit allowable, and these may be employed plentifully, and serve as the purpose of a mild laxative.

We come now to a consideration of the remedial treatment. Formerly colchicum was considered the remedy for all forms of uric acid manifestations. In fact by some writers, it was put down as a specific, but this claim has been losing ground for years, and it is now thought to be beneficial only in occasional cases.

Lithia enjoys some popularity, but this is now waning. Many who formerly employed it, now, after more extended trial find it disappointing when a severe case is treated. Again, many cases which seem to improve under lithia, are not pure instances of the uric acid diathesis. Salicylic acid and salicylate of sodium have enjoyed for a long period a good reputation in the treatment of acute rheumatism, but they fail to give best results when the uric acid factor is the dominant one.

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It is altogether probable that many cases of rheumatism—(so-called)—are nothing more than manifestations of the uric acid diathesis.

The old way of treating uric acid manifestations, by giving purges, is irrational. Of course the patient will do best if the erelbo was kept loose, but I enter a protest against the regular employment of purgative drugs, such as calomel and other agents of that character.

The natural mineral waters, which mildly act on the bowels, are advised since they do not produce exhaustion, irritation, or inflammation of the intestinal coats. For some time I have employed for the treatment of the uric acid diathesis, a very soft natural alkaline spring water, with results that were a little short of brilliant. I refer to the Allouez Magnesia water. The patient supplies himself with a liberal quantity of this water, and I impress on him as earnestly as possible, the importance of never failing to take it as directed. When I can do this and the patient will give a reasonable ear to diet, I accomplish results which are most satisfactory indeed. In fact, in my practice of now more than twenty years, this remedy has proved to be the most eliminating agent I have yet found, and I repose the most implicit faith in it, to accomplish cures of cases of this character.

I have the patient take regularly one glass of the water (hot if possible) an hour and another half an hour before each meal, and the same to be taken one-half hour and one hour before going to bed. Prompt absorption into the system follows the introduction of the hot mineral water into the stomach. When taken at body temperature, or warmer, its solvent and eliminating action is generally facilitated.

Let me give in a brief manner the histories of several cases treated with this water. Mr. S. M., age 30, hotel keeper, had florid complexion, carried a full quota of flesh, and suffered with pain and swelling in the shoulders, with headache and indigestion. His urine was deep red and heavily clouded. I at once arrived at the conclusion that this rheumatism and indigestion were caused by uric acid retention. I required him to observe the diet and to take a two quart bottle of Allouez Magnesia water per day before his meals. Patient began the treatment in full earnest. After taking the water five weeks, he had no pain, was improved in every other way, and is now well and enjoying good health.

Mrs. I. W. M., age 27, had lumbago with indigestion and constipation. This condition had resisted every effort of several physicians. I saw in this case the uric acid diathesis, and began with Allouez and the diet, assuring my patient that she would recover if she would follow my directions zealously. She did so and in a month was well. She keeps a supply of the water in her cellar and resorts to it whenever there are any symptoms of her old trouble.

Mr. L. M., age 49, had chronic rheumatism of the hip and the symptoms of uric acid were also present. The man plainly showed that he was a high liver. On Allouez taken in the manner already described, he made a speedy recovery, using the water only six weeks.

These cases will, I think, suffice to show the treatment.—DR. R. C. KENNER, Louisville, Ky., *in Medical Times.*

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MEDICAL LITERATURE OF THE DAY.

Abstracts of Interesting and Instructive Contributions Skimmed from Our Exchanges.

On the Etiology of the Nausea and Vomiting of Pregnancy.—Evans (Amer. Gyn. and Obstet. Jour.) considers only the mild or physiological form which occurs in nearly every case of pregnancy. He summarizes his theory as follows: 1. There exists more or less of a rhythm in the paroxysms of nausea and vomiting of pregnancy. 2. There must also exist a rhythmical existing cause for these paroxysms. 3. There is a rhthym in the contractions of the uterus which occur throughout pregnancy. 4. The essential exciting cause of the paroxysms is frequently the physiological contraction of the muscular fibres of the uterus.

Hernia in Pregnancy and Pregnancy in Herniæ, with Note on Umbilical Hernia.—Manley (*Med. News*, January 27, 1900) is of the opinion that inguinal hernia is not aggravated by pregnancy, but that diminutive femoral hernia may be enlarged by it. The uterus is sometime lodged in the hernial sac and may become impregnated. In this case abortion should be produced or hysterectomy done. Umbilical hernia is probably never produced by pregnancy, but it is frequently greatly exaggerated by it. This condition is difficult to treat, being rarely entirely reducible, and prone to erosion, hemorrhage and incarceration. Pregnancy seems to be a deterrent rather than a cause of strangulation. The author mentions two cases in which the muscular structure of the recti and oblique had disappeared as a result of pressure, the contents of the abdomen protruding as a large pouch. In a case of irreducible epiplocele the omentum was divided and a good recovery resulted.

The Relation of Digestive Disturbances to Gynecology and Obstetrics.—Benedict (*Med. Age*, February 10, 1900) emphasizes the importance of specialists having a preliminary experience in general medicine. He gives 27 cases showing that gastroenterology is often an aid to gynecology and *vice versa*. Pain in the right iliac fossa accompanied by leucocytosis may either be due to disease of the appendix or of the adnexia. In the latter case immediate operation is not so urgent. In either case the temperature might be low and the condition still be dangerous. It is sometimes difficult in cases of vomiting to decide between gastric irritation or pregnancy as the cause. Other conditions to which attention is called as likely to resemble pelvic disease are dyspepsia, chronic constipation, subacute gastroenteritis and movable kidney. The author regards conservatism in gynecological operations as dangerous.

To the Rockies and Beyond via Missouri Pacific and Rock Island Route. A new through sleeping car line will be operated between St. Louis and Denver over the above lines on and after June 1st. This is the shortest and quickest through sleeping car line between these points, leaving St. Louis 9.00 A. M. daily and arriving in Denver 11.00 next morning.

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The Medical Fortnightly.

Issued Tenth and Twenty-fifth of Every Month by the Fortnightly Press Co.

UNDER THE EDITORIAL DIRECTION OF

FRANK PARSONS NORBURY, M. D. AND THOS. A. HOPKINS, M. D.

Secretary: CHARLES WOOD FASSETT, M. D.

A COSMOPOLITAN BIWEEKLY FOR THE GENERAL PRACTITIONER

Editorial Offices in St. Louis, Chicago, Cincinnati, Jacksonville, St. Joseph, Kansas City, and Pueblo, where specimen copies may be obtained and subscriptions will be taken.

Address all business communications to the Fortnightly Press Company.

Address all contributions and books for review to the Editors, Suite 312, Century Building, Saint Louis.

Paris: U. S. Press Building, Espanade des Invalides, Paris Exposition.

Volume XVII **JUNE TWENTY-FIFTH** **Number 12**

Editorial Department.

Surgeons and the Presidency of the A. M. A.

IN a casual glance over the list of the Presidents of the American Medical Association, it is to be noted that of the twenty-two elected since 1880, eighteen of them have been chosen from the ranks of surgeons or surgical specialties. Internal medicine has had two representatives, and the general practitioner in all this time has been honored but twice. This is a unique fact, and one which emphasizes the conditions in American medicine strikingly in contrast with those of England or of France, where practical medicine has shared equally in the disposition of such honors. What is it in American practice which gives supremacy to surgery? Is it because America leads the world in surgery, and practical medicine is pushed to the background, or is it that our surgeons are more active in medical society enterprise, and consequently more frequently in line to receive honors?

We are sure that American internal medicine is just as progressive as American surgery; in fact American practical medicine leads the world. The English speaking medical world has the record in the actual results of progressive medicine. In literature, in teaching, in hospitals American internal medicine stands pre-eminent, and in this division of honors pray let it have a share. We have no fault to find in the presidential selection made at Atlantic City, excepting that it seems to us that the claims of medicine should be heard, and no one could more fittingly bear these honors than William Osler, of Johns Hopkins University, whose work, whose character and manhood make him the true American physician, the leader in internal medicine in this continent, if not of the English world, and the American Medical Association should do him honor, and honor itself in 1901 in giving him the presidency.

We are in earnest about this, not because it is the right to which medicine is entitled and which must be given her, but because Osler deserves it. All honor to American surgery, but all honor to American medicine, too.

F. P. N.

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The Psychology of the Mob.

IN THIS day of strikes, where mob law by force seeks supremacy, and where law and order are for the time being suppressed, it is perhaps not out of order to discuss some of the psychological factors entering into the abnormal outburst of anarchy and rebellion, to be noticed during scenes of riot incidental to these sociological earthquakes. Sidis says suggestibility is a fundamental attribute of man's nature. Man in his social capacity does display this property, either in a normal or abnormal way. In the normal, stable way, we notice man accepting suggestions from the lecturer, the orator and the preacher. In the abnormal or unstable way, we find the violence of the mob, wherein disaggregation of consciousness is affected. Self is lost in the mob, and there is displayed the truth of the axiom, "Intensity of personality is in inverse proportion to the number of aggregated men." The larger the crowd the greater the dissociation in the consciousness of it.

The crowding together of people contribute to the cause of the mob's peculiar psychology. "The crowd contains in itself all the elements and conditions favorable to a disaggregation of consciousness. It is a state favorable to suggestion, and needs only the ringleader to plunge it into mob violence. This plunge is usually accomplished by some sudden act or violent impression, such as in the riot of June 10th, when a brick thrown at a passing street-car, plunged the crowd into mob violence, and how quickly the personality of the crowd changed to a mob of violence. And then, like an avalanche, it rolled until the posse of armed men could not stay its sweep without shedding blood. At such a time the suggestion given by the leader is taken up by the crowd, and it acts as one individual with blind obedience. The individual personality of its members is lost in the whirlwind of the mob violence. The latent demon is aroused, and the fury thus aroused is wild and hysterical. When the outburst is over and the individual emerges from the congregated mass, he is apt to realize what a fool he has been, or else in a half-dazed way he tries to realize what actually happened.

A study of these individuals usually reveals the fact that in a measure they were alienated from self, and acted through abnormal suggestion. Such suggestibility is a form of hypnotism—hypnotism on a large scale, and the crowd in its action can be as absurd, as haphazard, as the poor hypnotized subject on a public exhibition. The results are serious—death and destruction sweep along in its pathway, and its acts seem to us after it is over, incredible. It requires suggestion equally as powerful to quell this storm, and a few judicious acts on the part of fearless men may bring peace out of riot and safety from threatented danger.

St. Louis for several weeks has had an opportunity to study the psychology of the mob. F. P. N.

DR. SAMUEL G. GANT, recently elected Professor of Rectal and Anal Surgery in the New York Post-Graduate Medical School and Hospital, has removed from Kansas City, Mo., to No. 58 West 56th street, New York City.

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Boston Will Keep Watch Over Consumption.

IT IS an encouraging sign of the times to note that Boston has decided to keep watch over consumption. The City Board of Health of Boston at a recent meeting adopted new rules, requiring that every physician must report every case of consumption that comes under his notice just as he does any other case of contagious disease. In view of this decided advance it seems appropriate to offer congratulations to Boston and its civic health officers on their efforts to extend preventive medicine, and to wage an unceaseless war on the scourge of civilization. The co-operation of every physician should be given, and every sister city should join hands in this wise movement of public prophylaxis F. P. N.

A Round-up in Chicago.

THE whole lot of mix breed irregulars of Illinois are to "hot foot" it towards Chicago this week, where a grand round-up is to be held. The goats are to be mixed with the sheep, and those sheep without skins are to be on the same stamping-ground with the pure half-breed "Billy" from far down in Archey road. The sockless boxers from Zion City, followers of the meek and wealthy Dowie; the motal thoughts removed for a dollar-cash-while-wait-subjects of Bean Porridge Eddy; the old-rusty-joints-cleaned and readjusted liver regulator from Kirksville—Still off their tangents; the autograph album physicians from the Armstrong mills; the free-thinkers; the no thinkers and the get-in-the-band-wagon Bland(ine) mixers; absent treatment Weltmer need not come, for he can be present and yet be absent. Oh! what a crowd—all are to round up and are to be branded as representative men—learned men—good men and a persecuted lot of innocents (?). Then with humble supplications, diamond shirt studs, and the glad hand, they are to invade the legislative halls and seek the divine right of quacks—an open-door, wider, higher than China can ever have, so that he who even thinks he is a healer may come to Illinois and think freely on a C. O. D. basis.

All of the by-ways and the hedges are being combed to get this motley group together, and to insure that they get to Chicago, the railroads are offering one fare for the round trip. A fat stock show wont be in it when these high rollers strike the Chicago Beach. We suppose Dowie will deliver the address of welcome, after which a scow ride on the Chicago river will be in order, and then a visit to Armstrong's mill and Bland's Blatant Bugle Blaster office. Then refreshments will be served to the minds of christian scientists by some one reading a chapter from Mary Baker Eddy. Then for the delight of the osteopaths—a clinic by Still (the only original) on an Indian fresh from a mound builder's village in poor old Missouri; in which he will demonstrate his prehistoric science on a prehistoric man, and try to make the public believe it is a new thing. Oh! these razzle-dazzle practitioners know a few things, they will make the public dance rag-time to their melodies, while the no care, no pay policy players will shoot craps on the top of their temple of fame. Won't there be a hot time in the old town? F. P. N.

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The Educated Man in the Profession of Medicine.

THE object of a collegiate education is to teach a man to think correctly, enlarge his field of observation, and to make the best out of life. No man can be too well trained in any avocation and in medicine the thoughtful, broad-minded man will lead in professional success. It is not to be expected that a college training will make a man out of a student, if the elements of character are wanting. But if the true test of a man, his character, is to be found in a college man, his college training will fit him for the best possible success in life. College life develops character; it does not spoil manhood, but takes the rough edges off of the diamond found in the human character, and brings out its brilliancy and true worth. Every young man contemplating medicine as a career should first consider his preparation, and, if possible, secure a college training. President Thwing, of the Western Reserve University, says: "Every boy in the United States who really wants a college education can get one." This we know is true, and in our six years association with college men as a teacher, we know that he who wants a college training can get it. The young men who enter medicine after completing a collegiate course, are the ones who see the real professional side of medicine, and, consequently, comparatively few fail to make a success. Their standards are high, and they choose medicine, not because they expect to measure their success by the dollar sign, but because of the breadth of its intellectual compensations. Such men attain the highest success, and we need more of them. F. P. N.

American Medical Association.

THE officers and committees of the American Medical Association are to be congratulated on the very successful way in which the fifty-first annual meeting was conducted at Atlantic City, N. J., during the present month. There was nothing to in the least mar the enjoyment or profit of the occasion, the weather was perfect, and the place selected for the various sections was ideal. Atlantic City is itself an island standing out in the sea, and it has two long piers extending far out over the water. On these piers are built several long auditoriums with smaller halls attached, giving ample room for the general session and nearly all section meetings, beside a place for the exhibits. The whole water front connecting these piers, and extending for several miles, is traversed by a wide board walk, over which pedestrians can overlook the beach and the sea.

The general sessions, which were held each morning at 10 o'clock, were well attended, and a large amount of business was transacted, including numerous improvements in the Constitution and By-Laws.

Dr. W. W. Keen, of Philadelphia, the very talented and worthy President of the Association, had given great attention to the work of the Society, and presided with vigor and justice. His address delivered in general session should be carefully read by every physician. He embodies the

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ideals which we should strive to attain. It was a thorough, practical talk to doctors for their uplifting. It contains a plea for higher medical education, and by statistics and arguments he impresses the urgent need of endowments for our medical schools. While the clergy in the United States have accumulated endowments which average about $2500 for each student, our medical colleges have less than $48.00 for each student, yet the necessary equipment for a medical school is vastly more expensive than for a theological or academic school. This was one of the many telling points which Dr. Keen impressed forcibly upon the profession.

The several section addresses also attracted much attention. The oration on Surgery was delivered by Dr. W. L. Rodman, of Philadelphia. The oration on Medicine was delivered by Dr. J. A. Witherspoon, of Nashville, Tenn. The oration on State Medicine was delivered by Victor C. Vaughn, of Ann Arbor, Mich. We trust that all of our readers who did not have the privilege of hearing these addresses will read them when they are published in full.

The President, with the assistance of the pathologists from a number of our large institutions in various cities, had arranged a new feature for this meeting. This consisted of an extensive pathological exhibit, including both macroscopical and microscopical specimens of a large number of pathological lesions. The continued large attendance upon this exhibit, demonstrated conclusively the desire existing in the profession for more directed instruction in these branches. The Bureau of Agriculture contributed an interesting department to this exhibit in numerous fresh specimens taken from diseased hogs, sheep and cattle. Tuberculosis actinomycosis and numerous other pathological lesions common to live stock were exhibited in great variety.

We sincerely hope this exhibit will be continued and enlarged from year to year, as of all the presentations at this meeting of the Association this was by far the most interesting and instructive. Dr. Keen and the pathologists are to be congratulated on their happy thought in installing this new departure.

The Constitution and By Laws were so changed as to limit the papers in any one section to thirty, thus affording more time for discussion. At this meeting, as at many others, the papers were all read very hurriedly, and many of the authors were unable to complete their reading for lack of time. Discussion was very much curtailed in many instances. With the number of papers reduced almost one-half, we should certainly have better and more exhaustive discussions. This is a movement in the right direction.

C. E. B.

AMERICAN MEDICAL ASSOCIATION NOTES.

The New Jersey State Medical Society held its annual meeting just preceding the sessions of the American Medical Association.

About 3500 doctors were in attendance at the fifty-first annual meeting of the American Medical Association at Atlantic City this year. This was one of the largest, if not the largest, session ever held.

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The B. & O. Railroad furnished splendid accommodations for those attending the meeting of the Association this year. Their elegant trains from St. Louis and Chicago furnish every facility for comfort and luxury in travel, and their patrons received many courtesies which the tourist always appreciates.

Dr. Philip Marvel, Chairman of the Committee of Arrangements of the Atlantic City meeting, was untiring in his efforts to make the occasion a success in every way. Every doctor in attendance should certainly feel thankful to Dr. Marvel for his very successful organization of the local features of this meeting.

The American Medical College Association met at the Shelburne Hotel on Monday evening preceding the opening session of the Association. The principal medical colleges and universities in the United States were represented by fifty-six members present. Dr. Parks Ritchie, of St. Paul, Minn., was made Chairman, and Dr. E. Fletcher Ingals, of Chicago, Secretary.

Among several hundred hotels of all classes in Atlantic City, none furnished better accommodations to its guests than Hotel Pierrepont, situated at Ocean End of New Jersey Avenue, and owned by Cannell Bros. John R. Pugh, the chief clerk of this up-to-date hotel, is untiring in his efforts to please his guests, and the many doctors who were fortunate enough to select the Pierrepont left with the highest praise for their treatment while in Atlantic City.

Preceding the sessions of the Association, the National Federation of State Examining and Licensing Boards was held at Hotel Traymore. About one hundred delegates were in attendance. The new Ohio medical law was explained by the Honorable H. N. Love. Dr. Emil Amber, of Detroit, Mich., presented the question of co-operation and reciprocity in medical licenses, also the desirability of a National Confederation of Examining and Licensing Boards, looking to the enactment of more uniform medical laws.

One of the enjoyable features of this meeting was the annual dinner of the American Medical Editors, which was held on Monday evening at the Hotel Dennis. No class of specialists among doctors are so well known and wield so great an influence as the medical editors. At this dinner were seen and heard some of the most prominent figures in the profession of the United States. As the dinner progressed, numerous topics were responded to by the various members, and all agreed in pronouncing it a most auspicious occasion.

There were a large number of receptions and smokers and entertainments given at Atlantic City this year for the entertainment of the visiting members of the medical profession. In fact every hour, even into the wee small hours of the night, was filled with some sort of entertainment. One of the most enjoyable and notable of these was the reception given by the retiring President, Dr. W. W. Keen. This was held in the large auditorium on the steel pier, and was largely attended. Dr. Keen was assisted by his daughter and Dr. and Mrs. Philip Marvel.

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Among the interesting features of the meeting was the reception of Dr. Jacobi, of New York, and the presentation of a loving-cup.

The exhibitors at the meeting this year certainly had no grounds for just complaint. They were given ample room for their exhibits at the entrance to the hall in which the general sessions were held, so that all attending the general session, or going for registration or information at the general bureau, or to get their mail at the Association Postoffice, had to pass the exhibits. Almost everything that a doctor needs, and many things which he could well do without, were brought prominently to his notice, and many an M. D. went away with a large basket well filled.

The fifteenth annual meeting of the American Academy of Medicine was held at Hotel Shelburne on Monday. The following officers were elected for the ensuing year: President, Dr. Samuel D. Risley, of Philadelphia; Vice-Presidents, Dr. C. M. Culver, of Albany, N. Y.; Dr. Rosa Engelman, of Chicago; Dr. G. G. Graff, of San Juan, Porto Rico, and Dr. Chas. T. McClintock, of Detroit; Secretary and Treasurer, Dr. Chas. McIntire, of Easton, Pa.; Assistant Secretary, Dr. Alex. R. Craig, of Columbia, Pa. A large number of interesting papers were presented during the sessions of this society.

The newly-elected officers are: President, Charles A. L. Reed, Cincinnati; Vice Presidents, A. W. Calhoun, of Georgia; A. A. Woodhull, of Denver; Philip Marvel, of Atlantic City, and Wm. E. Quine, of Chicago. The newly-elected trustees are: J. M. Mathews, Louisville, Ky.; E. F. Ingals, Chicago; W. L. Rodman, Philadelphia, and M. F. Porter, Fort Wayne, Ind. At the 1901 meeting the Oration in Surgery will be delivered by Dr. John A. Wyeth, of New York City; the Oration in Medicine by Dr. N. S. Davis, Jr., of Chicago; the Oration in State Medicine by Dr. George M. Kober, of Washington, D. C. The next meeting will be held in St. Paul.

THE action of Congress on June 4th, appropriating $5,000,000 for celebrating the centennial of the Louisiana purchase makes the St. Louis World's Fair a certainty. It now behooves every American to lend his enthusiastic assistance that the fair may be a colossal success.

THE steamship "City of Rome," which sails from New York on June 30, will carry a party of 300 physicians and their families, enroute to the Paris Exposition and the International Medical Congress. The members of the party will make a tour of Scotland, England, Germany and Switzerland, before reaching Paris, while quite a number will visit Venice and Rome. The party is under the guidance of Mr. Frank Clark, of New York, and was organized by Drs. J. W. Pettit, J. W. Cokenower and Chas. Wood Fassett, who are delegates to the International Medical Congress.

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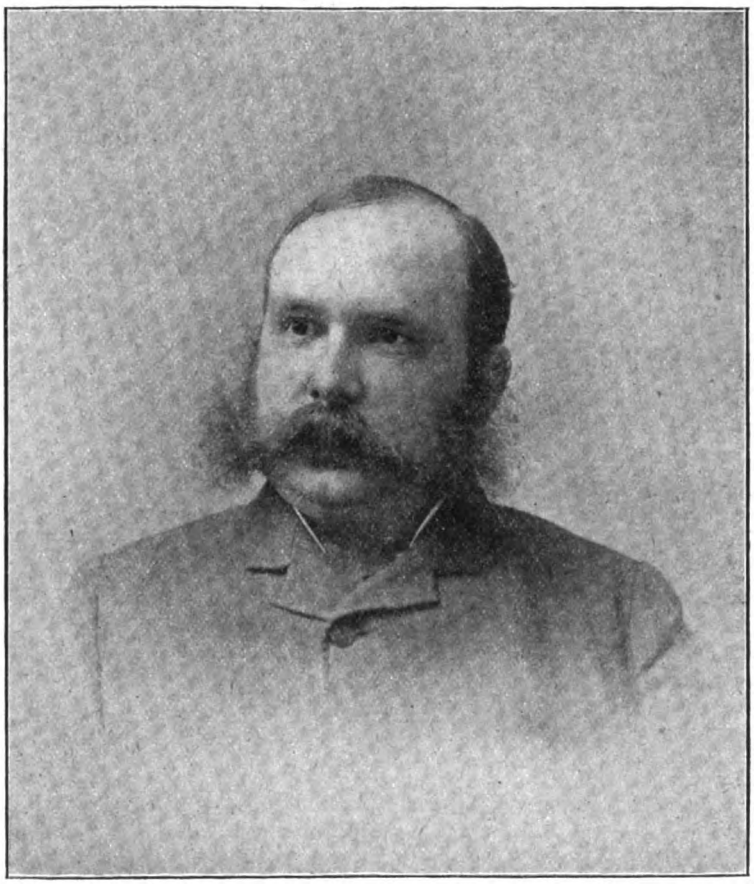

THOMAS H. MANLEY, M. D.,

NEW YORK CITY.

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Original Department.

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Diagnosis and Symptomatology in the Appendicitis of Children.

BY THOMAS H. MANLEY, M. D.,

NEW YORK.

Abstract of an essay read at the meeting of the American Medical Association, Atlantic City, N. J., June 5, 1900.

IN NO branch of surgery has so much attention been bestowed during the past ten years, as that which deals with lesions of the appendix-vermiformis, their pathology and treatment.

It is self-evident to anyone, that it is absurd to discuss the pathology of a structure, the physiology or function of which is yet quite unknown, if, indeed, it has any, any more than the terminal appendix of the spinal column has any, other than that a rudimentary tail.

THE INTERPRETATION OF SYMPTOMS AND DIAGNOSIS.

The practitioner, therefore, has to deal rather, here, with facts than philosophical speculations. He can learn but little more on the problem of operative-technique, as that cannot be much further simplified or improved; but of what is often more difficult to master than surgical technique, is the art of correctly interpreting symptoms and accomplishing correct diagnosis in those typhilitic cases. There is much yet to be learned.

That the symptomatology of appendicitis has been exceedingly vague, we may gather from the fact that it was as late as 1827 when we had the first accurate description of the morbid-anatomy of appendicitis by Menier.

More adequate descriptions bearing on symptoms later appeared from the pens of Dance and Albus, but sixty years passed before these investi-

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gations bore fruit, and Sands, of New York, for the first time on record, diagnosed perforative-appendicitis in a boy of 12, removed the organ by surgical operation and saved the patient.

In 1887 Weir was able to collect but fifteen cases in which laparotomy had been performed for supposed perforated intestine. The appendix was the seat of perforation in four of these, although this was not discovered until after death.

SEXUAL FREQUENCY AND RELATIVE AGE.

About the same sexual differences in frequency obtain at all ages. It occurs most frequently in early adult life, but may be encountered at any age. Jalaquier records 182 cases at an early age in his own practice; 4 were under 5 years, 42 from 5 to 6, 64 from 10 to 15 years, 25 from 15 to 20. There were 112 males to 70 females.

Other tables, as Bamberger's, Matherstock's, Gordon's and Burri's, show about the same relative frequency in early life.

The population of New York City proper, is about 2,000,000. In 1899 there were 299 deaths from appendicitis; 58, or about one-fifth in children; not such a startling mortality.

DIAGNOSTIC FEATURES IN THE CHILD.

The causative factors in the child, as with the adult, remain exceedingly obscure. But, when we come to diagnosis and symptomatology, we draw a wide line between these two stages of life.

We must remember that the child is yet in his evolutionary stages of development, we have not yet the difficult sexual distinctions, nor the organic complications peculiar to advancing years. The organs are yet immature, the intestinal canal in its various segments, bear different relations, to those found in the adult; the cæcum may have not yet descended, or is not definitely fixed; the child's pelvis is shallow, and the bladder is much more uncovered by peritoneum than the adult's; hence, why paresis of the bladder and painful evacuation of it is much earlier, and more constant sign of appendicitis in the child, than later in life.

In consequence of the absence of abdominal fat the cæcum lies more superficial, and is more easily palpated; but as Dr. Joseph H. Byrne, of New York, has demonstrated, concretions in it may be appreciated with the index finger and thumb, and be safely expressed outward into the cavity of the bowel, in cases of appendicular colic.

COMPLICATIONS, ETC.

It is, therefore, obvious that appendicitis is usually less difficulty of detection in the child than after full growth. Complications, it goes without saying, are less frequent, though they are in evidence only too often; as tuberculosis, dysenteric ulceration, intussusception, worms, enteritis, malaria, displaced kidney, cæcal coprostasis, internal hernial strangulation, subphrenic, supernephric or psoas abscess.

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SYMPTOMATOLOGY.

If diagnosis is simple in the child, symptomatology is very much more obscure than in the adult; routine prescribing for his frequent colicy pains, his indigestion, dentition and other functional derangements is so common, that unless caution is observed, we may overlook the disease in its early stages.

It has been stated that in the child there is seldom pronounced symptoms until the bowel is perforated. Breton insists that absence of pain is a distinguishing characteristic in the non-perforation appendicitis of childhood, and Talamon advises delay in operating until this symptom is pronounced. Despine alleges that the onset of septic appendicitis is exceedingly obscure in the child, and in time, says Dienlafoy, unless operated early, the mortality is larger.

TYPHILITIS, PERITYPHILITIS AND PERATYPHILITIS.

It is remarkable to note how general the practice is, to ignore affections of the cæcum and the peri-cæcal tissues in discussing appendicitis.

It is now quite generally believed that the appendix may be diseased *de novo*, though so able an authority as Mr. Frederick Treaves insists that the starting point of infective processes, is quite invariably in the coputcolio.

In symptomatology it is always well to remember that pericæcal inflammation is very common, that the "tumor" appears rather abruptly, and as quickly vanishes, under tentative treatment, when the bowel is not perforated, or tuberculosis is absent.

DR. R. B. H. GRADWOHL sailed for Europe early in June. The doctor will spend two years studying in German and Austrian universities and hospitals.

AS a result of the strike the St. Louis Medical Society adjourned to meet when means of transportation are favorable. There will probably be no meeting until the close of the regular summer vacation.

ASSIGNMENT OF INTERNES.—Health Commissioner Starkloff has assigned the successful candidates for positions as internes at the hospitals as follows: City Hospital.—Drs. W. H. Luedde, B. G. Pinkerton, James A. Matlock. R. L. Campbell, Homer W. Davis, Albert Miller, S. B. Prouty, F. L. Morse, R. S. Slusher, John D. Hess, Homer M. Little, James A. Townsend, S. M. Taff, W. H. Mook, C. P. Murrell, Emmett P. North, William E. Hall, B. P. Norwell and E. H. Little. Female Hospital.—Drs. Abe Iralson, M. O. Stemmler, Norman Windsor, Zay Little and Emil H. Hencklor. Drs. F. W. Abeken and Louis Rassieur, of last year's class of internes at the city Hospital, have been appointed by Dr. Starkloff to positions as senior assistants at the same institution. Dr. Clarence Loeb has been appointed consulting bacteriologist at the City Hospital.

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The Significance of Fever in the Diagnosis of Diseases of Infancy and Childhood.

BY JOHN ZAHORSKY, A. B., M. D.,

ST. LOUIS,

Chief of the Children's Clinic, St. John's Hospital Dispensary, Washington University Medical Department; Attending Physician to the Bethesda Foundling Home, and the Episcopal Orphan's Home, etc.

Arranged from a clinical lecture delivered at St. John's Hospital.

GENTLEMEN: Fever is the most common symptom in the diseases of infancy and childhood, but, nevertheless, it has a definite significance.

When in the presence of a little patient, it will be your duty to establish the presence or absence of this symptom. This is readily done with the clinical thermometer; a temperature of over 99.5° F. signifies febrile movement. But there may be no rise in temperature at the time when you examine the patient, yet it may be a febrile disease, since so many fevers of infancy and childhood have an intermittent character. You will then question the mother or nurse if she has noticed any fever. Of course, this is not very reliable, for mothers frequently overlook a slight fever; it is only when the fever is very high, that they will say, "the baby was so hot," or "it was so thirsty," or "it had a burning fever." Nevertheless, with the aid of a clinical thermometer and an intelligent mother, you will rarely fail to establish the presence or absence of this symptom at your first visit.

Having established the presence of fever, you note in your mind its significance.

Fever indicates the presence of an infectious disease. As a corollary it may be added that an acute fever indicates an acute infectious disease.

By an infectious disease we mean a disease produced by the growth and activity of toxicogenic micro-organisms in some part of the body. In short, an infectious disease is one caused by micro-organisms.

But is this rule universal? The exceptions are so few that for practical purposes they may be disregarded. Fever occurs in heatstroke, in injuries to the cranial vault and brain, and occasionally in severe injuries to other parts of the body, as a fracture without infection. Formerly, it was supposed to be due to various reflex excitations, such as teething, renal calculus and intestinal irritation; but these causes are becoming rarer; and teething without some infection of the gum cannot be considered a cause of fever. Gravel is exceedingly common in infancy, but it is very questionable that this in itself causes fever. Simple intestinal irritation does not cause fever, but the putrefaction of the intestinal contents is a common cause; yet this must be placed among the infectious diseases.

There are certain diseases which are accompanied by more or less fever which are not usually placed among the infectious diseases. Such are rheumatism, chorea and leukemia. But few authorities now deny the infectious nature of these diseases, although bacteriological proof is wanting.

We must, therefore, insist that fever indicates an infectious disease, and is due to a pyrogenic toxin elaborated by micro-organisms. Yet the

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trichina spiralis can hardly be designated a micro-organism, but trichinosis is accompanied by fever. We are compelled, therefore, to extend our word micro-organisms to a few larger organism. Since this rule has such strong groundwork, we are at once anxious to know if its converse is also true.

Is it true that all infectious diseases are accompanied by fever?

Theoretically this also has only a few exceptions. Of course, we must exclude at once certain local infections of the skin and mucous membrane, such as favus, ringworm and acne. Small furuncles also may be accompanied by no fever, but large furuncles in children are always accompanied by more or less febrile movement.

But the difficulty lies in certain diseases which have fever in only a part of their course when the patient is not under observation. Under this head is pertussis, which shows fever only in its first stage. Fever in the second and third stages must be considered as some other infection. Then tuberculosis may show no fever, or fever only in the later stages of the disease. Syphilis has no recognized febrile movement, although syphilitic fever has been frequently reported.

Having found fever present, and, therefore, established the presence of an infection, our next duty in the diagnosis is to locate the infection.

Practically all the tissues of the body may be the nidus of bacterial activity, still in infancy and childhood certain organs are much more frequently the seat than others, and for convenience of diagnosis we divide the body into certain tracts, viz.: The respiratory tract, the gastro-enteric tract, the genito-urinary tract, the circulatory system, and the nervous system. To this must be added the integument, the osseous system, and finally the blood.

In making a diagnosis, in locating an infection, these various parts must be carefully examined.

Usually, however, the mother can give other valuable hints that will locate the infection. Thus a cough directs us to the respiratory tract, diarrhea to the enteric tract, and convulsions to the nervous system. But these hints may be erroneous, and may not guide us to the right source, still we act on them. If there is a cough present, we examine the lungs by physical examination, also the pleura and bronchial tubes. By this method we may locate the infection.

But we may have no cough, and still the upper air passages be the site of infection. Older children can tell that they have a sore throat, but infants cannot. In all infectious diseases in infancy in which the cause is not plain, think of the upper air passages. Examine the nose and throat. In a great majority of fevers in infancy the cause is disease of the upper air-passages.

We examine the throat—look for congested areas, swollen tonsils, œdematous spots, reddened pillars, and congested palate. Here we find the various pseudo-membranes on the tonsils and on the mucous membranes. Here is the favorable culture ground for the Klebs-Loeffler bacillus, the streptococcus pyogenes, the influenza bacillus, the pneumococcus, etc. Accordingly as this or that micro-organism is growing there and

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causing disease we name the disease diphtheria, tonsillitis, grip, or simple angina.

But the infection may be higher in the naso-pharynx. This cannot be inspected in infants and children, except with great difficulty. We must rely on inspection of the nostrils and examination of the discharge. Or thick muco-pus may be seen clinging to the posterior wall of the pharynx, showing evidence of naso-pharyngeal inflammation.

We must not forget that acute otitis media gives rise to a fever in infants. This is exceedingly common, but, unfortunately, it is overlooked. Certain obscure febricula can be traced to middle ear inflammation. The pus may be discharged through the Eustachian tube, and thus hide its existence.

Inflammation in the deeper layers of the throat must not be overlooked. Such are peritonsillar abscess, retro-pharyngeal abscess, angina Ludovici and suppuration of the cervical glands. All these diseases give rise to fever. We find, therefore, the upper air-passages and the surrounding structures a great nidus for bacterial infection. In part this is due to the little resistance offered by the lymphoid structure; viz., the tonsil of the fauces and naso-pharyngeal vault; but it must also be remembered that the upper air-passages receive as a deposit the bacteria of the inspired air. Congregation of individuals and non ventilation of rooms pollute the air, and thus cause the greater prevalence in winter.

The acute exanthemata also have their origin in the throat, and usually show their presence at this site first. Evidences of scarlet fever and measles particularly must be sought for.

Having found no infection of the air-passages, we pass on to an examination of the gastro-enteric tract. We must not forget various infections in the mouth that give rise to fever. The most common is ulcerative stomatitis, which is usually accompanied by high fever. Gingivitis, ulceration at the root of a tooth, inflamed mucous membrane over a tooth just appearing—all these may give rise to the fever. Occasionally diphtheria starts in the oral mucous membrane, and in its severest form produces that terrible disease called noma or canrumoris.

The most common infection of the stomach and intestines is that of its contents, and putrefaction and fermentation of the food ingested must be sought. This is best shown by examination of the vomitous and stools. But frequently the infection also attacks the mucous membrane, particularly the colon and ileum, and we have as a result an ileo-colitis.

Unfortunately, we can as yet not make a bacteriologic diagnosis in diseases of the digestive tract. In diseases of the respiratory tract we can in a great majority of cases pronounce the infection diphtheria, influenza, pneumonia, etc., and by so doing we know the micro-organism causing the mischief. But nothing like this is possible in diseases of the intestinal tract. The nature of the great majority of the infections are still obscure. But we must not forget to palpate the abdomen carefully, excluding the presence of appendicitis, peritonitis or abscess of the kidney or liver. We look for evidences of typhoid fever palpating the spleen, and also for rose colored spots if the history of the fever suggests it.

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Infections of the nervous system giving rise to fever are infections of the meninges by several micro-organisms. These can be fairly well distinguished by the nature of the symptoms. The brain substance may also be the seat of infection.

In the genito-urinary tract acute cystitis, pyelitis or suppurative nyslivitis gives rise to fever.

The integument is the seat of a variety of infections that give rise to fever. The exanthemata are the most common. Erysipelas is a dangerous disease in infancy, and gives rise to high fever. Furuncles and abscesses commonly give rise to a fever. Then follow infectious wounds, phlegmon, and lymphangitis. Purpura, erythema multiform, and even impetigo may be accompanied by more or less fever.

Infections of the muscular system is very rare. In the connective tissue are found cellulitis and abscesses. But the osseous system is a common focus of infection in infancy and childhood, and must never be overlooked. Tuberculosis is exceedingly common and causes a mild, irregular fever. But almost as great in importance are the acute infections, which give rise to high fever, and are often mistaken for typhoid fever or malaria. These are acute osteomyelitis, acute osteo-periostitis, and acute arthritis of infants. All these are serious diseases.

Diseases of the circulatory system are usually limited to those of the heart. We have a variety of infections of the pericardium and the endocardium. The rheumatic valvulitis must be considered an infection of unknown origin. In an irregular fever of childhood not due to malaria, suspect endocarditis.

Closely connected with diseases of the circulatory apparatus are infections of the blood. At the head of this list is malaria. Then follows rheumatism probably. A great variety of septicemias are known These are due to the typhoid bacillus, the pyogenic bacteria, and to the pneumococcus and others. Of extraordinary importance in the diagnosis of acute infections is an examination of the blood. By this means we can name the infection when other means fail. A leucocytosis is found in infections by the pyogenic bacteria, the pneumococcus, the meningococcus, scarlet fever, etc.

Absence of leucocytosis is found in influenza, typhoid fever, malaria, and tuberculosis. The presence or absence of casinophiles has a diagnostic importance.

It will be seen what a large number of infections are possible. Usually in children, and even in infants, the location of the infection is pointed out by our symptoms, such as pain and disturbed function. But if there are no signs or symptoms indicating the site; or if the character of the fever, as in malaria, offers no clue, then nothing remains for us to do, except to carefully examine the various tracts, as I have pointed out. This must be done most frequently in infancy, as these little patients can tell us nothing.

Fortunately, there are two tracts by far the most frequently involved, namely, the respiratory and gastro-enteric. The former has its greatest number of diseases in winter, the latter in summer. In private practice,

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therefore, in the presence of a fever in infancy, in winter we expect the respiratory passages to be involved, and this surmise, on examination, usually proves correct. This is what makes the diagnosis in infancy really easy, because the location of disease in the great majority of cases is limited to definite and well-known areas.

1635 S. Grand Ave.

Peripheral Facial Palsy with "Crossed" Hemi-Paresis.

BY F. SAVARY PEARCE, M. D.,

PHILADELPHIA,

Instructor of Physical Diagnosis, University of Pennsylvania.

Read before the Philadelphia Neurological Society, April 23, 1900.

THIS case of a colored man, teamster, aged 58, I show to the society as one of an interesting "crossed" paralysis in which I am not entirely clear as to etiology of the hemi-paresis, although it seems in some way connected clinically, at least, with the complete peripheral paralysis of the seventh nerve, which antedated the trunk lesion. The man reported to the Howard Hospital clinic of Dr. J. Madison Taylor on the 17th of June, 1899, presenting the complete left facial palsy which you see tonight. There was no trouble with his general musculature at that time. He then stated that three days previously, he noticed he could not close his left eye, the complete facial paralysis rapidly supervening. It is likely the real paresis began four weeks earlier when he states, on questioning, that he sat in draught for some time; and this was followed by pain in the left parietal and mastoid regions, with tenderness on pressure over the same areas which has existed in some measure up to the present time. He was treated by blistering and potassium iodide in 5 gr. doses three times a day; and was referred to the ear clinic where suppuration of the left middle ear was diagnosed and treated by Dr. Vansant. There was no disturbance of sensation over the paretic area, nor was there any disturbance of the sense of taste, but the tip of the tongue was oddly pushed toward the right in its protrusion. The man was treated carefully with descending galvanism during the summer, which seemed to restore in paretic facial muscles. There has never been more than the slightest alteration of the formula as evidence of degeneration of the left facial nerve. In October, 1899, Dr. Posey examined the eyes, found the discs normal and no changes in the fundi. There is at the present time some tenderness over the left mastoid region, but the ear had ceased discharging.

The man was admitted to the ward in October, and remained under galvanic treatment with continued treatment of K. I. and $\frac{1}{10}$ gr. doses of strychnia for seven weeks. There has been practically no permanent improvement in the face.

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On December 1st, in the morning, while walking upon the streets he became dizzy, nauseated and finally vomited much bile. He then became dazed, had to be carried home, immediately followed by feebleness in the right leg and arm, preventing him from being able to walk for some time. He reported to the clinic again on February 24th, 1900, when both knee jerks were found to be increased, more marked on the right side. The right arm and leg were feeble, the tongue was slightly protruded toward the right side. Bromide of soda was given in 10 gr. doses, thrice daily, galvanism was continued to the left face. At the end of a month, his condition was as follows: Knee jerks increased, can walk better, there is still ankle clonus on the right side, none on the left. . The elbow jerks are increased, especially on the right side. He walks in an hemi-paretic manner. April 21st, 1900, there is a generally enfeebled gait with hemi-paresis of the right side of the body, no anesthesia existing anywhere on the body, and the facial palsy remains (as you see tonight) complete and permanent; the left conjunctiva is inflamed from constant exposure, the eye remains open. The heart sounds are clangy, though there is no murmur. Arterio-sclerosis is not marked, kidneys and other organs are normal. There is no true aphasia, but speech is muffled, due to the paresis of lips and tongue.

CONCLUSIONS.—There seems to be no doubt in this case that the primary cause of the *left* facial paralysis is due to septic otitis media with extension and perhaps permanent impairment of the seventh nerve function. The fact of the sudden oncoming hemi-paresis of the *right* side of the body following three months later than the left Bell's palsy, would naturally bring the thought as to abscess in the left motor region of the cerebrum secondary to the ear disease with pressure symptoms, or to a primary hemorrhage involving the same left motor area of the brain, At all events, I take it, prognosis is bad in this man, who has such a broken-down physique. At any rate the case is worth reporting from the peculiar "crossed" type of paralysis existing Although there are no symptoms of abscess of the brain, we are not entirely convinced that a pus collection, due to continuity from the septic left ear might not be the remote cause of both paralyses.

Hemorrhoids.—

A writer in the Nord Medical gives the following ointment for hemorrhoids;

℞ Cocain. hydroch ..... 15 grains
Ergotine..... 60 grains
Ichthyol..... 65 grains
Calomel..... 45 grains
Vaselin.....
Lanolin .....aa.225 grains

M. Sig.: A portion as large as a small nut to be inserted into the rectum after each evacuation.—Canada Medical Record.

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The Serum Treatment of Tuberculosis.

BY C. R. SPICER, M. D.,

TAYLORVILLE, ILL.

Read before the District Medical Society of Central Illinois, at Pana, April 24, 1900.

TWO AND ONE-FOURTH centuries ago there lived, in Amsterdam, one Antony van Leeuwenhoek, a linen draper by trade, but of a scientific turn of mind. He acquired a knowledge of lens grinding, and perfected a lens more powerful than any microscope that had been used at that time. With this lens he demonstrated minute organisms in water, in the intestinal canal of frogs, and in the dejecta from his own bowels. These he termed "The minutest forms of animal life." He published the result of his research, and speculated on the relation of these minute organisms to disease. From his description and plates there is little doubt that the organisms he observed were bacteria.

Then followed some two hundred years of speculation and contention as to the origin of these germs; one faction claiming for them spontaneous generation; another that they were evolved from their own kind; while a third claimed they were inanimate and bore no casual relation to disease.

The timely investigations of Pasteur on the putrefaction of beer, and the souring of wine, and the observation by Pollender of germs in the blood of animals dead of splenic fever, lead Henle to believe and to teach the doctrine of infection.

Though much laborious research had been made and much valuable knowledge acquired, regarding the matter of infection, a vague and indefinite haze of uncertainty enveloped the whole subject. It remained for Koch to collect this incoherent material into a logical unit which constitutes the basis for the bacteriology of today.

True Jenner had revived the art of vaccination practiced by the early Persians, Hindoos and Chinese half a century before Pasteur experimented with the beer and wine; and more than hinted at the antitoxic action of infecting agents, but of course he never suspected that he dealt with bacteria.

After Pasteur's initial experiments bacteriology grew rapidly, and in 1882 Koch in an address before the Physiological Society of Berlin made known his discovery and investigation of the tubercle bacillus.

Dixon, in 1889, found that guinea-pigs, suffering from tuberculosis, were cured by injecting them with the products of the growth of the tubercle bacillus suspended in glycerine.

Koch quickly took the hint and applied the treatment to man, but without success. His solution, "tuberculin," has, however, been a valuable diagnostic agent, since individuals free from tuberculosis show no reaction on being injected with tuberculin, while those with a tuberculosis lesion show a marked febrile disturbance.

Bouchard in an address to the French Congress of Medicine at Bordeaux in 1890, claimed originality in the treatment of infective diseases by the injection of bacteria or their products, although Hankin, in his paper on

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"Defensive Proteids," sets forth the same theory. Bouchard claimed that the specific effect on the invading bacteria was produced by the serum injected, and not by the leucocytes of the patient. Behring and Kitosato, in 1890, showed that the antitoxine acts in doses too minute to have any antiseptic action.

However futile have been the attempts to show the rationale of these agents, their therapeutic value in many instances is acknowledged by the profession generally. While the antitoxines of diphtheria, tetanus, puerperal septicemia, and others have established reputations for themselves that promise to be enduring; the serum for the cure of pulmonary phthisis has been less fortunate. The hright anticipations of each investigator have been followed by disappointment in regular succession from Koch to Paquin. One important point, however, seems to be definitely settled, that the anti-phthisic serums have an inhibitory action on the tubercular processes.

The uncertainty of the nature of the antitoxic principle involved had proved a barrier to progress along this line until Behring showed that the antitoxic principle in all the anti-phthisic serums varied only in quantity, and that a given quantity of toxic material could be neutralized—that is, combined and rendered inert by a sufficient quantity of anti-phthisic serum of any brand. Thus the important question as to the identity of the character of the serum being settled the potency was yet to be determined.

Until this time conflicting reports from experiments with the same serum arose. In fact no standard of potency had been agreed upon. Efforts had been made to calculate results by the amount of serum used regardless of its potency. The standard of toxicity adopted was the amount of toxic material necessary to kill a guinea-pig of given weight in a given time.

Much study and effort have been devoted to the production of a material of high toxic effect since the antitoxic potency of the serum obtained from the animal injected will be proportional to the toxine used. This toxic material is injected for several months into the animal which is to furnish the antitoxine.

The serum used in the cases reported below was the "Antiphthisic Serum T. R." (Fisch).

The patient is a young lady eighteen years of age. Family history tubercular—an uncle and aunt on the father's side dying of tuberculosis. Father and mother living and healthy. One sister has tuberculosis. Personal history negative until patient was nearly eighteen, when she had la grippe. She made a poor recovery; but continued in high school until March 18, 1899. She complained of pains in the right axillary and mammary regions during February and the first part of March. Slight rise of temperature; menstruation irregular and scanty. Inspection showed loss of movement in the left mammary region, apex beat normal; chest symmetrical and somewhat emaciated. Palpation gave increased vocal resonance over left lung, and tenderness on deep pressure over spleen and epigastrium. Percussion showed marked dullness over left infraclavicular space and mammary region. Auscultation showed increased vesicular murmur over right lung and left supraclavicular space. From the character

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and intensity of the pains in the left side I regarded them of a pleuritic nature, though at no time was friction fremitus obtained. The dullness in the left mammary region was very intense, amounting almost to flatness. There was no change in its upper line on change of position, nor was there any displacement of the apex beat. The temperature on April 1st rose to 103. It varied during the month from 101⅜ to 105⅕. The dullness extended to the left infraclavicular region; moist and dry rales were present in both lungs; profuse expectoration, in which the bacillus of tuberculosis was found in small numbers. Night sweats were profuse; frequent chills occurred followed by high fever. Emaciation was extreme.

My partner, Dr. Dickerson, then in Saint Louis, was now called, and later Dr. Behrens, of St. Louis, who diagnosed the case quick consumption and predicted a speedy dissolution. The case had progessed steadily, regardless of the ordinary treatment—creosote, ferruginous tonics and iodine and Crede's ointment locally. In this extremity serum therapy was suggested. Through the entreaties of the family to make every possible effort, Dr. Dickerson consulted Dr. Fisch personally, and presented the case to him. Dr. Fisch was quite conservative, and offered no different prognosis from that of Dr. Behrens. He thought, however, that the serum might control the fever to some extent. With this meager encouragement the treatment was begun September 11, 1899. The initial dose was eight minims, given hypodermically. But slight reaction followed, and the dose was increased to fifteen minims. The first change noticeable was in the temperature, which began slowly to decline in about a week. The night sweats then became less profuse and the chills ceased. The cough and expectoration diminished, and in about ninety days the cough had practically ceased. The general condition improved, and menstruation returned, but was somewhat irregular. One hundred and four injections were made in all. Seven months have elapsed since the beginning of the treatment. During the first four months, and long after the other symptoms had subsided, there was still slight temperature, 99–100½. For the last three months, however, the temperature has been practically normal until recently, when an acute attack of tonsillitis supervened. She has almost regained her usual weight. Inspection of chest finds slight depression in the left mammary and infraclavicular regions. Auscultation shows normal vesicular respiration over both lungs, except in the left mammary and infraclavicular regions. No rales, no cough, no night sweats; but patient is still weak and tires easily on exertion. During convalescence various tonics have been used—iron, quinine and strychnia, pepto-ferro-manganese, codliver oil and the syrup of the hypophosphites.

It is only fair to state here that a sister of the lady whose case has just been reported had tuberculosis about a year previously, with bacilli in the sputum, and that on the old line of treatment—creosote, codliver oil and inhalations of oxygen—so far recovered that she is now teaching school.

Of three other cases treated by serum injections two were improved, and one died. Only about thirty-five injections were made in each of these cases. The case that died was in the third stage of phthisis, and had a large cavity in the left lung.

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Fisch has tabulated a list of twenty-one cases in the *Journal of the American Medical Association* April 8, 1899, to which my experience corresponds very well. The whole number of cases reported is too small to form a basis from which to draw definite conclusions. A few inferences which may be safely drawn are:

1. That the treatment should be begun early.
2. It should be continued a long time.
3. It should not be used in hopeless cases.

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On Resuscitation of the New-Born by Laborde's Method.—(Fronezah, Buffalo Med. Jour., January, 1900.)—This method consists of a rhythmetic traction of the tongue at the respiratory note, which causes a reflex irritation of the phrenic through the superior laryngeal, glosso-pharyngeal and lingual nerves. The author regards it as superior to Schultze's method even in case of deep asphyxia. The latter method does not give good resultsin prematurely born children, and cannot be used when there is fracturethe extremities, which faults do not exist in Laborde's. Four cases are cited illustrating the use of the method.

Pneumonia from a Public Health Standpoint.—(Newsholme, *The Practitioner*, January, 1900.)—An account of the frequent occurrence of pneumonia as a complication of other diseases, it is difficult to form valid conclusions as to the death-rate from the primary disease. Statistics for England and Wales give for the two decades, 1871–1880 and 1881–1890, death-rates of 1004 and 1066 per million. During the first decade one out of every twenty-one, and in the latter one out of every eighteen deaths was due to pneumonia. The greatest rate of mortality falls during the first years of life, and the next greatest during old age. Males are more susceptible than females, except between the tenth and fifteenth years, when the female mortality is somewhat the larger. Considering the decades 1861-70 and 1881–90, the author says, that at all ages between 10 and 55, increase in pneumonia has corresponded with decline in bronchitis. At the same ages, and continued to some extent to the end of life, there has been a marked decline in phthisis, which is, however, almost certainly not caused by a transference to pneumonia. Broncho-pneumonia is commonly secondary to bronchitis and accounts for the transference between pneumonia and bronchitis. Croupous pneumonia is usually primary. The majority of cases occur during cold weather. Negroes are more subject to the disease than whites, and outdoor laborers than the more protected. The author considers a number of epidemics, and calls attention to the importance of unsanitary conditions in the spread of the disease.

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Symptomatologic Diagnosis of Valvular Obstipation.

BY THOS. CHAS. MARTIN, M. D.,

CLEVELAND, OHIO.

Abstract of a paper read before the Ohio State Medical Society at Columbus, Ohio, May 8-11, 1900.

OBSTIPATION is that form of impaired defecation which is due to the presence in the rectum of an organic obstacle to the descent of the feces through it.

If it be the function of the normal rectal valve to beneficially retard the descent of the feces it is obviously true that it may be the especial property of the valve in certain other than normal conditions to maliciously obstruct the descent of the feces. *

The *position* of the obstructing valve and the *character* of its disease may be determined from the patient's symptoms and, I may add, also, that one skilled in proctoscopy may on inspection of the rectum, detail to the patient the history of the case without a word having passed on the subject.

1. Valvular obstruction *below* the rectosigmoidal juncture.
2. Valvular obstruction *at* the rectosigmoidal juncture.,
3. Anatomic coarctation or congenital juxtaposition of the rectal valves.
4. Hypertrophy of the rectal valve.
5. Fibrosis of the rectal valve.

1. Valvular obstruction *below* the rectosigmoidal juncture is characterized by straining at stool for the passage of solid feces.

2. Valvular obstruction *at* the rectosigmoidal juncture is characterized by long intervals between the acts of defecation; by an occasional passage of a considerable quantity of feces without much straining, and, by tenderness and a sense of fullness in the left iliac fossa and lower abdominal regions.

3. If two rectal valves develop in such a degree of anatomic propinquity that the pressure of the feces on the proximal valve will put the free border of that valve upon and across the next lower valve there is erected at one point an almost impassible barrier to the descent of the feces for the reason that the interlocked valves unite and form a diaphragm, which temporarily walls off the rectal chamber occupied by the feces from the next lower empty chamber

4. Hypertrophy of the rectal valve is characterized by the almost sudden establishment of obstipation. The condition is initiated by a sense of gentle aching and moderate heat in the sacral region, by aching down the thighs and by discharges of a small amount of viscid mucus.

5. Fibrosis of the rectal valve is characterized by a very gradual development of the obstipation.

Valvotomy cures.

* OBSTIPATION, A Practical Monograph on the Disorders and Diseases of the Rectal Valve, Thos. Chas. Martin, Ph. D., M. D. Philadelphia Medical Publishing Company.

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Reports on Progress.

COMPRISING THE REGULAR CONTRIBUTORS OF THE FORTNIGHTLY DEPARTMENT STAFF

GENERAL SURGERY.—C. E. Black, M. D., Jacksonville, Ill.

DISEASES OF THE CHEST—W. W. Bulette, M. D., Pueblo, Colo.

INTESTINAL AND RECTAL SURGERY—S. G. Gant, M. D., New York City

DISEASES OF THE MIND—Frank C. Hoyt, M. D.

RHINOLOGY AND LARYNGOLOGY—John A. James James, M. D.

GENITO-URINARY SURGERY AND SYPHILOLOGY — Bransford Lewis, M. D.

OPHTHALMOLOGY—J. Ellis Jennings, M. D.

ORTHOPEDIC SURGERY — Phil. Hoffman, M. D.

GYNECOLOGY—Josephine Milligan, M. D., Jacksonville, Ill.

OBSTETRICS—R. B. Murphy, M. D.

MEDICINE — Frank Parsons Norbury, M. D.

CLIMATOLOGY—Hubert Work, M. D., Pueblo, Colo.

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GYNECOLOGY.

IN CHARGE OF DR. JOSEPHINE MILLIGAN,

JACKSONVILLE, ILL

Notes on an Improved Method of Removing the Cancerous Uterus by the Vagina.—By Howard Kelly, M. D., in the March, 1900, *Bulletin of the Johns Hopkins Hospital.*—Histological studies show that uterine cancer extends progressively through the tissues from its cervical focus; the aim of the operation is, therefore, to give the diseased cervix the widest possible berth. The frequent recurrence of the disease in the vaginal scar points to the importance of enucleating on the vaginal side far beyond the manifest limits of the invasion, not less than 2–2½ cm. distant or more. The most important preliminary is to catheterize the ureter, leaving the renal catheters in place to mark out their position, and so to prevent any injury to them. After curettage of the diseased area, the vagina is cut through on all sides, the bladder stripped loose and the vesico-uterine peritoneum opened as widely as possible. If the bladder is diseased, its base may be cut off and left sticking to the cervix; then the peritoneum is opened posteriorily, so that the uterus is attached by its broad ligaments alone. A gauze pack is put into the pelvis behind the uterus, the cervix is thrust back against it; the anterior uterine wall is caught with musean forceps step by step, and drawn down through the anterior incision, until the fundus appears at the vaginal outlet. Then the uterus is bisected from above downward; one-half of the body of the uterus is caught by stout museau forceps, the other retracts within the vagina, after the cervical portion of the same side is caught by forceps, the body is severed from the cervix from within outward; the uterine vessels are clamped in the exposed cellular tissue, then the round ligament, and lastly the uterine cornu.

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In this way one quadrant of the uterus is removed. The body of the uterus on the opposite side is next removed. Ligatures are applied in place of the clamps. The ovaries and tubes are removed after the body of the uterus. The half of the cervix least implicated is now enucleated, keeping the rigid catheterized uterus continually under touch. The important part of the operation is to remove the last half of the cervix with as wide an extirpation as possible. The blood vessels may be controlled by ligature, or by Skene's cautery clamps, or by igni extirpation as practised by Mackenrodt. If necessary, the ureter is cut off above the diseased area, and after the enucleation is finished, it may be stitched into the denuded bladder (ureter-cysto-neostomy). The anterior and posterior peritoneal surfaces are then drawn down and attached to the vagina, and are again sutured together in the middle line, having but two small openings into the pelvis to be loosely stuffed with gauze.

A Case of Multilocular Pseudomucinous Cyst-Adenoma of the Right Ovary Associated with Pronounced Symptoms of Diabetes.—In the *Journal of Obstetrics and Diseases of Women and Children* for February, 1900, Dr. H. D. Begen considers it warrantable, from the study of the literature and the history and course of four cases reported; one by Croom, one by Imlach, one by Greal, and one by himself, to make the following deductions: 1. That in rare instances where disease of the female internal genital organs is associated with diabetic symptoms and a large quantity of sugar is found in the urine, the diabetic symptoms and sugar seem to be dependent on the disease of the genital organs. 2. That in other cases the excretion of a large amount of sugar by the kidneys without diabetic symptoms seems to be dependent also on the disease of the female internal genital organs. 3. Since in every case of any class or classes of disease of the female internal genital organs no such association has been observed, it is probable in order to produce the diabetic symptoms, and excretion of sugar by the kidneys, there may be present in addition to the disease of the genital organs, which we are able to recognize, some special and separate lesions or abnormal secretions of the genital organs, or some affections of other organs, or some special predisposing condition of the body. 4. That such cases as the four cases mentioned above, and those cases to which Tait and Tecarche have given the name "climacteric diabetes," may be cured by the induction of the climacterium, the removal of gross disease which allows the completion of the climacteric change, or by the progress of the normal climacterium.

The Surgical and Mechanical Treatment of Dysmenorrhea.—The following conclusions are drawn by Dr. I. S. Stone on the above subject (*American Journal of Obstetrics and Diseases of Women and Children*, February, 1900): 1. A large majority of cases of dysmenorrhea occur in neurasthenic or neurotic women, and operative treatment alone will not affect a cure. 2. Dysmenorrhea due to flexion is not cured by the use of intrauterine stem, for at best the uterus is kept straight only while the stem is in position. 3. The practice of divulsing the uteri of virgins under 21 years of age, or before maturity and complete development of the organ, is generally to be condemned. 4. Dysmenorrhea due to actual stenosis is

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rare, and if present we frequently find that one or more ineffective operations have been done. 5. Dudley's modification of Sims' operation promises good results, as it insures a large cervical canal which cannot be closed by cicatricial contraction. But this operation is only indicated in cases of stenosis of the canal, as in those rare cases where an antiflexion of high degree prevents the escape of the menstrual flow. Dudley's modification of Sims' operation is briefly to divide the posterior lip and lower third of the uterus, then to suture the incised posterior lip into the angle of the incision, high up, so that very little raw surface is left, and the canal closes by granulation.

A Contribution to the Pathology and Treatment of Gonorrhea in Women.—Dr. H. Schultz, in the *Frauenarzt* for April, 1900, says, that the diagnosis of gonorrhea in the female genitalia should rest on the proof of the presence of the gonococcus, whether the secretions are purulent or not. Of 200 prostitutes examined, 76 had uterine gonorrhea, 124 had cervical, 30 had both cervical and uterine infection, 48 had diseased adnexa. Those cases not healed by treatment were largely among those having diseased adnexa. The hospital cases of gonorrhea are largely among young prostitutes. Dr. Shultz's statistics are: that among those women who had been prostitutes 6 months 72.1 per cent were gonorrheic; 4 years 25 per cent; over 8 years 16⅔ per cent. The object of treatment is to destroy the gonococcus, hence the ability to give infection. This is best accomplished by using intrauterine applications, both in cervical and uterine gonorrhea; these applications may be a 4 per cent protargol solution, 5 per cent acet. pyrolignosum, 10 per cent argent. nitr., or 10 per cent argentarium. The argentarium was the most efficacious; it should be applied twice a week. The contraindication to its use is an inflammatary condition of the surrounding tissues. A help to the healing process is the application of ice and rest in bed. The intrauterine treatment of cervical gonorrhea has not practically extended the infection to the cavity of the uterus or to the adnexa. In 53 cases of the 76 cases of uterine gonorrhea, the gonococcus disappeared after the intrauterine treatment; in 23 cases the gonococcus persisted. In 81 cases of only cervical gonorrhea the gonococcus disappeared in all but 5 cases. The difficulty of curing these cases is greater if the process is old, and if the adnexa are diseased; therefore treatment should be instituted early while only the cervix is affected.

Round Ligament Ventro-Suspension of the Uterus.—In the March, 1900, number of the *American Journal of Obstetrics and Diseases of Women and Children*, Dr. D. Lod Gilliam describes his modification of Ferguson's method of suspending the uterus by the round ligaments. The basic principle of the operation is that of invagination of the proximal portion of the round ligaments in the abdominal wall, as evolved by Ferguson. The steps of the operation are: 1. A median abdominal section, of from three to four inches long between the umbilicus and pubis. 2. Break up adhesions and bring the fundus forward. 3. Seize the Fallopian tube and bring it to the opening, using for this purpose button forceps; these forceps are made by Tieman, like bullet forceps, but with blunt ends, so delicate tis-

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sues are not injured by them. After the tube is drawn into the opening the round ligament of the same side is seized 1½ inches from its uterus extremity and lifted up. 4. Carry a heavy silk thread under the ligament close to the forceps, in such a manner as to include a little of the tissue of the broad ligament. This may be done with an aneurism needle or ligature carrier. The thread forms a loop under the ligament, both ends of which are brought out of the abdomen and held by snap forceps. 5. The forceps holding the tube and round ligament are now removed. 6. The other round ligament is secured in the same way. 7. Retract the skin and superficial fat on one side until an inch or more of the rectus muscle is exposed; for this purpose use either a retractor or the fingers. The object of the retraction is to expose a point through which the forceps may be thrust into the peritoneal cavity. This point should be one inch external to the margin of the wound, and one and one-half to two inches above the pubis. 8. Thrust the perforating forceps through into the peritoneal cavity and seize the thread which holds the round ligament. The perforating forceps are also made by Tieman. The forceps are six inches long, the blade being one and three-fourths inches long; in general outline it resembles the Jeun compression forceps, but has a sharp end and edges, so it can be thrust through tissue. 9. Remove the clamp forceps from the thread. 10. Withdraw the perforating forceps. This brings with it the the thread, and the thread in turn brings the ligament through the perforated wound in the abdominal wall. 11. While the ligament is held taut, fasten into the wound by a few catgut sutures passed through its base and including the tissues on either side the entire thickness of the wall. 12. The exposed free loop of the ligament is now spread out on either side of its point of emergence and tacked down with catgut so as to form a button or bar. 13. Treat the opposite side in the same way. 14. Close the median incision.

Scabies.—

℞ Menthol..... 30 grn.
Adeps lanæ..... 1 oz.
Lime-water..... 1 fl. oz.
Benzoinated lard..... 1 oz.
—Merck's Archives.

Monroe (*Lancet-Clinic*) says, in case of external piles if my patient will not submit to the slight operation necessary for their relief, I give them the following ointment to use:

Opii powd..... 3i-ij
Tannin..... 3i
Subnit. bismuth..... 3ij
Borated lard..... 3ij

M. Form ointment.

This I apply as follows: Spread upon a thick cloth or lint, apply to the anus and fasten with a bandage.

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MENTAL AND NERVOUS DISEASES.

BY FRANK PARSONS NORBURY, M. D.

Formerly Resident Physician Pennsylvania Institution for Feeble-Minded Children; Formerly Assistant Physician Illinois Central Hospital for the Insane; Physician to Oak Lawn Sanitorium and Passavant Memorial Hospital; Neurologist to Our Savior's Hospital; Lecturer Psycho-Physics, Illinois College.

AND EGBERT W. FELL, B. S..

JACKSONVILLE, ILL.

The Psychology of Conversion.—(Editorial in *Medical News* of December 30, 1899.)—"Religious convictions, and especially that religious experience known as conversion, which is a natural accompaniment of adolescence in certain minds with given training, are so essentially an element in social relations that they offer a clue to the mental make-up of the individual," This fact, although of so great importance in the development of the mind of the boy or girl is apt to be ignored, except from a rather narrow moral standpoint. Professor George Albert Coe shows from a study of 70 or 80 persons of education and discrimination, that conversion is an experience of temperament and environment rather than a universal human experience. Striking conversions occur in those denominations that aim to secure them. The convert's experience depends on his degree of suggestibility, and he feels the expected emotions in just the degree he was capable of feeling expected emotions in other relations of life. "Would you understand the emotional aspects of religious experience? Do not ascribe them to the inscrutable ways of God, but to ascertainable differences in men's mental constitutions; do not theorize about divine grace, but study the hidden workings of the human mind."

Is It Hysteria?—Benedict (*Medical Herald*, April, 1900) objects to the loose use of the term hysteria, and would limit it to cases in which either extreme fatigue, grief, excitement or the typical hysterical psychic state exists as a factor. Digestive disorders and failure of renal function without trace of organic disease are due to defects of innervation by sympathetic or the pneumogastric nerves, or to autointoxication, and should not be classed with disorders of the higher centers. In disordered secretion, whether from demonstrable cause or otherwise, the disturbance of nutritive function may be sufficient to account for the disturbance of the conscious nervous system. Meteorism may be due to weakness of the coats of the bowel, or if there is an actual over-production of gas, this may be caused either by excessive action of bacteria or the production of carbon dioxide by the action of an excessive secretion of hydrochloric acid on the alkaline carbonates from the pancreas. Movable kidney and peritoneal adhesions are mentioned as giving rise to symptoms which were supposed to be hysterical. The treatment of hysteria consists in an attempt to restore self-control and the moral sense. In acute cases the prognosis is good, but in the chronic form, bad. The author does not favor the use of hypnotism as a therapeutic agent.

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A Visit to the Newest Psychopathic Hospital.— Peterson (*Medical News*, January 20, 1900) urges the need of hospitals for the acutely insane in the larger cities. Not only would these afford material for clinical study and give a stimulus to laboratory investigation, but the diagnosis would be made and the proper treatment begun earlier, and the patient would have better chances of recovery. Although psychopathic hospitals are unknown in this country, England and France, in Germany they have been in successful operation for some time. The hospital at Giessen is composed of a group of eleven cottages in close proximity to the university. Of these, four are used for each sex; one for excited, one for restless and suicidal, one for quiet, and one for private patients. About one hundred patients can be accommodated. The clinical examination rooms are provided with instruments and apparatus for treatment, and the policlinic for the dispensary patients gives opportunity for studying the very early forms of mental disorder. A scientific library, amphitheatre, museum, and laboratories of pathology, microscopy, physiological and pathological chemistry contain everything essential to the study of the relation of mind to body.

Transitory Mental Disorder in Hemicrania.— Krafft-Ebing (*Alienist and Neurologist*, January, 1900) says that the differentiation between hemicranial psychosis and masked epilepsy is, in the present state of our knowledge, very difficult. In view of the clinical relationship between ophthalmic migraine and epilepsy, a genuine transitory hemicranial psychosis should be thought of only after an epileptic significance has been excluded. The migraine replaces the epilepsy; if, therefore, the forms of insanity do not correspond to petit or grand mal there is a possibility of the existence of an independent hemicranial psychosis. If, however, hemicrania as manifested by migraine scotoma is regarded as the analogue of epilepsy with visual aura, the appearance of a transitory psychosis would favor the view of a psychical equivalent. The disturbance may also be a manifestation of hysteria. The author reviews ten cases that have been cited by Mingazzi as proof of his theory that a transitory psychosis may be produced by the vasoplastic state of the cortex at the base of the hemicranial attack causing irradiation to other areas, and finds symptoms of hysteria, epilepsy or neurasthenia sufficient to account for the symptoms in all the cases. Seven other cases are reported from the literature, and seven of the author's, and among these only three can be regarded as being in close clinical connection with migraine and particularly ophthalmic. The first of these, reported by Lowenfeld, was a woman who had had hemicrania since childhood. She had visual hallucinations, talked incoherently, was confused and developed amnestic ataxic aphasia, the attack passing off in six hours. The next case, the author's, was a mechanic who had religious delusions, and was in a dazed condition for several hours. During the attacks of headache he had optic and acoustic hyperesthesia, nausea and malaise. The third case, also the author's, was a woman with a family history of epilepsy and migraine. The psychical disturbance began before the headache, and was marked by scotoma and confusion. No certain etiologico-clinical conclusions can be drawn from these cases; the similarity to epilepsy is not to be mistaken.

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The Care of the Recent Case of Insanity.—(Burr, *Indiana Medical Journal*, January, 1900.)—In mental excitement from whatever cause, the object is to reduce the excitement and strengthen self-control. Rest in bed, away from the disturbing influence of friends, with very little exercise, is best for the patient. Constipation is best treated by calomel in divided doses followed by effervescent salts or aperient waters. A simple enema will usually be required early in the case, and sometimes later on. The use of the catheter is frequently required. The ice-bag to scalp or spine is of value in acute, exhaustive cases associated with rapid pulse and high temperature. The cold pack and cold bathing sometimes give satisfactory results. Depressing drugs should not be given. Chloral hydrate, sulfonal or trional are the best sleep powders. Tonics and tissue builders are indicated in all cases. Patients do much better in a hospital than at home. The treatment of depression is about the same, there being however greater need of improving the circulation and stimulating peristalsis. Electro-massage and salt baths usually produce quiet and tendency to sleep. Mechanical feeding should be avoided if possible, but if the patient persistently refuses food and there is threatened exhaustion, it must be resorted to. In weakened mental states, as neurasthenia, morbid tendencies or obsessions often appear and are very difficult to treat. Tonic treatment is required, and the patient must be encouraged to keep his mind occupied and off the unhealthful topic. In convalescence let the patient vegetate mentally, and do not permit him to be disturbed too soon by the access of friends. Massage, hydrotherapy and light physical employment build up the strength and promote cerebral nutrition. Suicide and self-mutilation should be carefully guarded against.

A Clinical Lecture on Alcoholic Insanity.—(Savage, *Clinical Journal*, August 30, 1899.)—Every symptom of general paralysis is represented by degrees of alcoholism. Unsoundness of mind is frequently caused by alcoholism, which should not be regarded as insanity, unless more pronounced symptoms develop. The first symptoms are often hysterical; there is a loss of physical control shown by tremor of the tongue, lips and hands, and a hesitating gait. Loss of memory of recent events is associated with confusion of time and space. There is a tendency to weak-mindedness, idiocy and imbecility, or in children, to convulsions, epilepsy and arrest of mental development if there is an alcoholic heredity. Peripheral neuritis is common, and misinterpretation of the sensations may give rise to hallucinations. Insanity may cause, instead of being caused by excessive drinking of alcohol. Restlessness and bouyancy often lead to drink which, is followed by depression. In this condition there may be a tendency to suicide, but more often impulsively than determinedly. Four cases were presented; the first a Hebrew, aged 25, family history negative. Convulsions and an attack of meningitis occurred during childhood. Patient has been intemperate for two or three years, and has had two or three attacks of excitement after drinking. About six months ago he fell on his head. Before admission he was excited, and at times depressed and threatened the lives of his family. He suffered from hypochondriasis with delusions referred to the body, but had no hallucinations of sight, hearing or taste until after ad-

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mission, when they developed as a result of peripheral neuritis. The second case was a man, aged 53 years. He was nervous, drank steadily rather than to excess, and developed delusions of grandeur and hallucinations of hearing. The memory is weak and there is confusion of time and space. There is no change in the speech function. The next case, a man aged 43, has a neuropathic heredity, and a history of syphilis. He has suffered for the last thirteen years with fits of depression, during which he drank more than usual. He now has mania, talks in an irrational manner, has hallucinations of hearing, sleeps poorly, and the memory is bad. Pupils are dilated, but the knee jerk is present. The cause being partly syphilitic the patient may recover. The fourth case is a man aged 56, with a heredity of alcoholism. He has been intemperate from boyhood. There is a general condition of apathy and hallucinations of sight and hearing; the patient is dirty in his habits, and incapable of dressing himself. He does not sleep well, but his appetite is good, his reflexes are normal and he is convalescing. The essential points of distinction between alcoholism and general paralysis are as follows: The paretic sleeps better than the alcoholic. The paretic has inequality of pupils with slowness of reaction. In the alcoholic the tremor of the tongue and labial muscles improve on treatment, but in the paralytic it does not. The changes in the reflexes of alcoholism are slight, in paralytics more marked. The exultation in paresis is more universal and benevolent than in alcoholism.

The Tolerance of Bromides in Elderly Epileptics.—(Editorial in *Medical News*, March 24, 1900.)—Although the bromides hold first place as sedatives in epilepsy, a great deal of mystery surrounds the tolerance of the drug. The symptoms of bromism are the same in old age as in the adult. To test tolerance the drug should be given without adjuvants and in gradually increasing doses. Individual tolerance varies extremely, especially in the aged, owing to the diseased heart and arteries. As a rule, tolerance is diminished in old age, but sometimes the reverse occurs, the administration being followed by surprisingly good results. Féré presents many cases to illustrate this, one a man aged 61 years, an epileptic of twenty-six years' standing, was given bromides, sixty grains daily, increased in three years to 240 grains daily, the attacks being reduced from one a day to one in three months. Threatened intoxication must be carefully guarded against, as a relapse necessitates a larger dose on resumption of treatment.

Nerve Depression Following Acute Affections.—(Moreman, *New England Medical Monthly*, April, 1900.)—Although the majority of cases of general debility may be regarded as secondary anemia this explanation will not cover all cases. In some cases extreme nervous prostration follows grippe, remittent, intermittent and typhoid fevers, pneumonia and pleurisy. Dyspepsia and a long list of other troubles produce debility of the nervous system with inability to keep the attention fixed on the usual work, headache, melancholy, and sometimes pains of an indefinite character. Opium should not be given to these patients. A nerve tonic is indicated, and the author has had good results from celerina. A sufficient, but not excessive, quantity of nutritious food and a light wine at meal time should be given. Aconite liniment is useful in pain.

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Diagnosis of a Case of Cerebral Tumor; Operation.—(Steffensen, *Medical News*, February 3, 1900.)—The patient, man 32 years old, first suffered from a slight dizzy sensation followed by numbness in right upper extremity, and for a few minutes complete aphasia. At intervals during the next two years numb sensations and involuntary movements of the right arm occurred. After this the patient had a convulsion with loss of consciousness, followed by headache. Vomiting of the projectile type, accompanied by headache, recurred every two weeks. Last July lateral nastygmus succeeded by outward deviation followed one of these attacks. Diplopia was present for three weeks. In August fourteen vomiting spells occurred during one day, following which the patient passed into a rigid state without loss of consciousness. Physical examination showed a partial iridoplegia and external deviation of right eye. Patellar reflex absent on right side. There was considerable movement of right arm during sleep. Agraphia, aphasia and alexia were present. Patient was very stupid and listless. A tumor weighing three ounces, involving the angular, supramarginal and the first temporosphenoidal gyri was removed; patient surviving the operation two hours.

Epilepsy Modified by Treatment and Environment, with Some Notes of Two Hundred Cases.—Barr (*Alienist and Neurologist*, January, 1900) has no faith in absolute recovery. There may be exemptions for a number of years, but the attacks are almost certain to reappear. Many forms admit of home treatment, regular habits, frequent baths and a carefully selected vegetable diet being important factors in the amelioration of the condition. The bromides are the most useful remedies. These may be combined with arsenic to prevent acne, and the treatment should be interrupted occasionally to allow the system to recuperate. In nocturnal epilepsy the combination of chloral with a bromide is useful, in anemic cases arsenic, chloride of iron and bromide, or belladonna and bromide have been used to advantage. In status epilepticus chloroform or a hypodermic of morphia and atropia, or of pilocarpine are used. The author has obtained no good results from solanum carolinense, hydrastin or eupatorium perfoliatiur, nor does he advise surgical treatment. Of the 200 cases carefully studied by Barr, 122 were male and 78 female. The appearance during the first five years of life predominated. Heredity is given as a cause in 126 cases, the majority being of an indirect nature. Traumatism, and injury to the mother during gestation are the most frequent exciting causes. The chief premonitory symptoms were maniacal violence, rapid debilitation, running and clutching, and the epileptic cry. Aura were present in only 29 cases. Mortality is higher in males than females, and the period of the highest rate is from 15 to 25 years. Among the poor especially is this condition disastrous. Being unable to care for them at home the patients must be sent to alms-houses, insane hospitals or institutions for the feeble-minded, and here from the want of suitable environment and occupation mental deterioration naturally follows. The colony plan as first established at La Force, near Bordeaux, in 1862, offers the most successful means of relieving the condition of epileptics, and has been quickly taken up by Germany, Switzerland, and to some extent in the United States.

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Reed & Carnrick have recently added complete physiologic, chemical, pathological and bacteriological laboratories to their plant at 42 to 46 Germania Ave., Jersey City, N. J. The laboratories are conducted in a manner so as to guarantee prompt, confidential, and accurate reports. They are supplied with the best reagents and most modern and complete apparatus and instruments for accurate work in physiology, pathology, chemistry, and bacteriology. The complete accessories, microscopic instruments, incubators, etc., are of the best make, and were furnished by the reliable and old-established firm of Queen & Co., of Philadelphia, Pa. The profession is invited to submit specimens and to investigate the laboratories. Fees for examination are very moderate; they may be had on application.

A Chinese Foundling Asylum.—One of the greatest of Chinese wickednesses, and one which missionaries are constantly deploring, is child-murder. A recently reproduced photograph shows a number of foundlings left at the door of that magnificent Italian institution, commonly called the "Girls' Orphanage," at Hankow. The institution now consists of five blocks of main buildings, two stories high. The number of inmates is seldom less than a thousand, and up to the present time 94,650 taels (£12,000) have been spent on grounds and buildings. The expenses amount to 200,000 francs per annum, and this is contributed mainly by by France and Italy. Females of all ages are admitted to the orphanage, from a baby to an old woman; though the institute prefers to have them when they are young. The inmates come in many different ways, and for many different reasons. The babies are received in much the same way as in all foundling hospitals. Baskets filled with hay are placed on the veranda at the front door of the orphanage, and the mothers who bring the children deposit them in the baskets. There is always a Chinese watch-woman on the lookout for these waifs of humanity, and as soon as they are noticed they are taken in and attended to. Nowithstanding all the attention bestowed upon them, the mortality amongst the foundlings is very high, and if ninety out of a hundred live it is considered very good. Even after babyhood is past the foundlings require constant care and attention, and have to be treated with cod-liver oil and maltine until they are five or six years old. And this, of course, means that had they been left to the tender care of their Chinese mothers not one of them would have lived. It is a well-known fact that the percentage of female Chinese children who die is enormous. Girl-babies are not a desideratum in a Chinese household, so that when too many come along they are got rid of. Parents who are not devoid of all natural feelings bring their children to the orphanage and leave them there. On several occasions babies only one day old have been left in the baskets; and it is no great wonder that such frail morsels of humanity succumb to the effects of such unnatural treatment. There are no fewer than 500 nurses in the institution. All kinds of curious precautions are taken to prevent the babies from getting mixed up, each child having a special collar fastened round its neck.—*The Wide World*, London, May, 1900.

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The Medical Fortnightly.

Issued Tenth and Twenty-fifth of Every Month by the Fortnightly Press Co.

UNDER THE EDITORIAL DIRECTION OF

FRANK PARSONS NORBURY, M. D. AND THOS. A. HOPKINS, M. D.

Secretary: CHARLES WOOD FASSETT, M. D.

A COSMOPOLITAN BIWEEKLY FOR THE GENERAL PRACTITIONER

Editorial Offices in St. Louis, Chicago, Cincinnati, Jacksonville, St. Joseph, Kansas City, and Pueblo, where specimen copies may be obtained and subscriptions will be taken.

Address all business communications to the Fortnightly Press Company.

Address all contributions and books for review to the Editors, Suite 312, Century Building, Saint Louis.

Paris: U. S. Press Building, Espanade des Invalides, Paris Exposition.

Volume XVIII **JULY TENTH** **Number 1**

Editorial Department.

Mental Fads.

THE students of modern mental pathology finds a boundless field for investigation in the growth of the mental fads of today. Christian science, magnetic healing, Dowism, osteopathy and allied mental disorders all contribute to this pathological exhibit, which grows like the Canada thistle, and are as persistently pests in their own peculiar ways. They grow in the minds of man, and generally upon poor soil, even though it be cultivated. It is presumed that all of the followers of these allied fads consider themselves capable, by reason of their intelligence, of judging of the genuineness of the alleged possibilities and true powers of these wonderful discoveries. To them the arrogance of the powers born-of-God discoverers is gospel truth —their keenness of insight into the ordinary affairs of the day, leads them to believe that they can penetrate any shams (if any exist) in the philosophy of Dowie or Mary Baker Eddy, of Still, of Weltmer and others, but as they cannot measure the utmost limits of their intellectual digestions they are surely apt not to see themselves as others see them. These fadists have not yet risen to the intellectual heights, and until they do they cannot understand all that is beneath them.

"Unless above himself he can
Erect himself, how poor a thing is man."

Their philosophy is decidedly fraudulent; they live behind a cloud, and until they can allow the true philosophic spirit to remove the obstruction which hinders their gaze, so that they can from the highest peak of true science see the intellectual world before them, they will be bowing to the tin gods, Dowie and his like. The pursuit of science counteracts this tendency to nervousness and bigotry, and will ultimately broaden the mind to more liberal views. Education of those capable of being educated is the only solution of the problem.

F. P. N.

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A Collection Agency Calls Us a Fool.

WE HAVE been guilty of being foolish. Why we know this, is by having one of our letters returned to us, on which was written in blue pencil, "Silly! silly! fool." Now, is that not enough to make the few remaining hairs on the dome of our intellect stand in defiance and say "you are another." But we won't quarrel, because, perhaps, the other fellow is right. We were just stirring up the animals a little with the Comstock Collection Agency, of Oswego, N. Y., but they flew the track on the second heat, also tried to crowd the pole all the way around. They believe we are foolish. Perhaps we are; who knows? We simply bought a contract with them to collect some delinquent bills—perhaps they lived up to their part of the contract; we know we have ours, except in a way unappreciated by Comstock, and utterly beyond the pale of endurance on our part. We simply write this as introductory, as we expect to publish everything they have written us, and perhaps everything we have written, if they will promise not to call us a silly, silly fool once more. We would ask our readers who are subscribers to the Comstock Agency to write us regarding their success or failure with their peculiar (string to it) contract. F. P. N.

A Reminder for the Care of Children during the Summer.

THE *Medical Record* published (June 30, 1900) a sprightly, timely paper with the above title. The author, Dr. S. Henry Dessau, is to be congratulated on his style. We briefly review some of the excellent points he made in his paper:

"Lest we forget, let us remember that the greatest number of infants and children under three years of age die annually from gastro-intestinal diseases.

"Lest we forget, let us remember that by far the larger majority of these diarrheas occur during the summer months. So true is this that they have deserved the name of summer diarrheas of infants and children.

"Lest we forget, let us remember that filth and bad air would not cause such extensive contamination of infant's food without the all-controlling influence of summer heat.

"Lest we forget, let us remember that if infants are deprived of nature's food we should provide an agreeable substitute, and should warn parents to combat the evil influence of heat by every means in their power.

"Lest we forget, let us remember that the heat-regulating function is easily overcome in infants, and that one of the first effects is weakening of the digestive function, which in combination with germ-impaired food and under the influence of excessive heat, presents the very best condition for an attack of diarrhea.

"Lest we forget, let us remember that certain germs which exist normally in the intestinal canal may under altered conditions exert a poisonous action, and hence even breast-fed babies may become victims of diarrhea. It is most imperative, therefore, to have the purest food for babies, but it

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is equally as imperative to keep the child as cool as possible. The cool country air is the best for this purpose, and in the absence of this other devises must be thought of—such as the liberal use of ice, frequent bathing, free ventilation, the lightest kind of clothing, and taking short trips on the water, crossing and recrossing the ferries, etc., and visiting the shady parts of the parks during the heat of the day."

THE mosquito in the light of modern investigation has become a creature of importance. As the purveyor of malarial parasites he is "the whole thing." It is believed by those competent to speak, that the mosquito is as dangerous as a grizzly bear, and as poisonous as a rattlesnake. However, the trend of the times is to take Mr. Mosquito from his obscurity and place him upon the pedestal of scientific inquiry, where "his kind," "quality," etc., may be analytically studied. He is studied as carefully as a steer at a fat stock show, or a hen at a chicken exhibit, and even has his photograph taken and placed on exhibition. In a recent number of the *British Medical Journal* directions are given for mounting and preserving mosquitos, which the State of New Jersey will do well to have printed and distributed freely among the mosquito farmers of that afflicted State.

The Mosquito.

F. P. N.

THE diseases of the stomach have within recent years been the subject of thorough investigation, until now they bear an importance in clinical medicine second to no other class of diseases. By reason of this newer knowledge and practical results of its application, it is important that every physician familiarize himself with the principles and clinical achievements in this modern field of research. To further this most desired dissemination of medical knowledge we have decided to publish a series of lectures on "Diseases of the Stomach," by Prof. J. M. G. Carter, M.D., of the Medical Department of the Illinois University of Chicago. They are timely, scientific, and thoroughly review this most interesting branch of clinical medicine. The first of the series will appear soon.

Diseases of the Stomach.

A GIRL'S COLLEGE EDUCATION.—A graduate of Cornell University will tell in a carefully detailed article in the August *Ladies' Home Journal*, "How a Girl Can Work Her Way Through College." There are almost innumerable methods by which a girl can pay for her education while she is studying. Colleges and universities make most generous provision for young women and young men who are without money, but who have brains and energy. So no apt, worthy girl need be without a college education if she wants one and is determined to have it. This article will tell how it is to be obtained through personal effort.

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NOTICE.—All surgeons, assistant surgeons, acting assistant surgeons or contract surgeons, and hospital stewards, who served in the army or navy of the late Confederate States, will please send their postoffice address to Deering J. Roberts, M.D., Secretary Surgeons' Association, C. S. A., Nashville, Tenn.

THE summer vacation is here, and the local medical man seems to be availing himself more extensively than is usual. Several have gone to the Paris Exposition and Europe, while the American wilds and resorts, with few exceptions, will boast of having entertained delegations from our borders when the season is ended.

AT LAST the St. Louis street railway strike is settled, and the end is just what thinking people anticipated, for the strikers were playing to a losing proposition. Records attribute 14 deaths, 170 more or less serious bodily injuries, vast financial losses affecting all classes, and seven weeks of constant apprehension on the part of 700,000 people to the strike; and some people claim that strikes pay ! ! !

THE kind of study that can best be pursued by children in summer time is precisely the kind that develops understanding and the ability to see a thing when it is looked at. No better preparation for the winter's work in mathematics or in Latin can be had than summer work with Nature. No worse preparation could be invented than the idleness or undirected activity of a long vacation.—*July Ladies' Home Journal.*

AMERICAN MEDICAL EDITOR'S ASSOCIATION.—The annual meeting of the American Editor's Association convened at Atlantic City, June 4th, and on the evening of this date the annual banquet was held at Hotel Dennis. Speeches were made and toasts responded to by Drs. Love, Senn, Wile, Culbertson, Stone, Hughes and a number of others. At the business meeting of the Association held in the parlors of Hotel Dennis, medical journalism and its influence upon medical progress was generally discussed, and it was decided to make the business session a leading feature of next year's meeting. The officers elected for the ensuing year are as follows: President, Dr. Alexander Stone, St. Paul; Vice-President, Dr. Chas. F. Taylor, Philadelphia; Treasurer, Dr. S. W. Kelley, Cleveland; Secretary. Dr. O. F. Ball, St. Louis. The next meeting of the Association will be held at St. Paul in June, 1901.

EXCURSION to AIX LES BAINS.—At a recent meeting of the Savoy Medical Association a committee was appointed to extend an invitation to the American physicians who will visit France during the summer. Resolutions were adopted with a view to the instruction and entertainment of all who may choose to visit this charming watering place. The railroads and hotels will make very low rates, and the entertainment will consist of a banquet, special fetes at the two grand theaters, trips up the switchback railway and excursion on the lake, free baths at all thermal institutes. The invitation is extended by the chairman of the committee, Dr. Thomas Linn, who is an American. It has been suggested that a party be made up to leave Paris on July 29th and returning August 1st. Those wishing to join the party will please send their names to Dr. Chas. Wood Fassett, United States Press Pavilion, Espanade des Invalide, Exposition Universale, Paris, France.

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Original Department.

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Drainage and Closure of the Abdominal Cavity.

BY T. C. WITHERSPOON, M. D.,

ST. LOUIS.

IT IS interesting retrospectively to view work we have done, and note success and failure. Nor is it time spent unfruitfully.

My best lessons have come through analysis of condition which lead me to conclusions either right or wrong. I wish to report some cases in this paper from which I have derived valuable information, and I do so, hoping they will interest you. Those selected bear upon the question of drainage and closure of the abdominal cavity; in some of drainage (with what—where how long), in others of closure (the technical procedure and the materials used).

The first two are cases of diffuse suppurative peritonitis. They are of value, too, in respect to conditions involved in diagnosis, and those determining the necessary remedial procedure.

J. B., age 38; German; mechanic; married, in excellent physical condition, was brought to the Rebekah Hospital, October 15th, 1899. Two days prior to his admittance he was taken suddenly with severe colic and vomiting, bowels somewhat bound up. His doctor giving him an opiate injection to relieve pain, and in the morning a saline purge. The pain continued to some extent, also bloating, vomiting and unrest. When he entered the hospital his temperature was 99.3, pulse 90. There was tenderness over the whole cavity, but not pronounced, nor was it increased to any appreciable extent over the region of the appendix. The was the apparent distension with no peristaltic movement of the intestines. His chief discomfort was a sense of nausea. The history of pain, the absolute ces-

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sation of peristaltic movement, tympanitic resonance, and the nausea lead me to advise opening the cavity. There was found a diffuse (general) suppurative peritonitis. The appendix was necrotic and perforated in a number of places. The cavity was thoroughly irrigated with a physiologic salt solution (sterile), and gauze and rubber drainage tubes were used. One tube extending into the cul de sac of Douglas, and one to either side of the mesocolon. The appendix was removed in its entirety by an incision into the cæcum, and the opening closed in the usual manner. Drainage was directed through the original incision in the right linea semi-lunaries. Immediately following the operation his pulse was 122, but three hours later it fell to 112, the temperature being at the time 99.3. The dressings were frequently changed under strictest care, and the discharge from the drainage tubes was quite free. Twelve hours after the operation the pulse was down to 100, and the temperature had risen to 100°. By next morning the pulse had fallen to 95, and the temperature to 99.3. During this period the drainage was quite free. There was no vomiting, and he rested nearly the whole of the night without aid of any kind. In the afternoon his temperature went up to 101.1, and pulse 114. The record shows that at this time there was very little oozing from the drain. He became restless, distension increased, perspired very freely, and pulse began to rise, while the temperature showed a tendency downward. Seventy hours after the operation his pulse had jumped up from 114 in the afternoon to 140 in the evening, and he died during the night. There was some odor to the discharge from the first, and toward the end it was more offensive.

The second case, T. W., American; cook; married; good physique, was brought to the hospital January 22, 1900. Examination revealed distended abdomen, tympanitic, a good deal of pain in the region of the spleen on inspiration, and also on pressure. Auscultation gave no evidence of peristaltic movement of the bowels, temperature in anilla was 98, and pulse 90. Vomiting was quite constant. Six hours after entering the hospital his temperature was 99 and pulse 92, at which time I advised an operation, making a diagnosis of general peritonitis. The previous history of the case was that four or five days prior to this time he complained of a belly ache, which persisted in spite of house remedies, and two days before coming to the hospital he called in Dr. G. C. Crandall. There was pain at this time the doctor reported over the whole lower abdominal region, but no definable localization. The temperature being normal and the pulse under 90, a diagnosis of fæcal impaction, or other form of obstruction, had been made. The belly was opened the night of the 22d. There was found a diffuse suppurative peritonitis. The appendix was gangrenous, and the fæcal matter, a teaspoonful, welled up along with the seropurulent discharge from the neighborhood of the cæcum. There were no adhesions of peritoneal surface, but a diffuse dusky red color everywhere. The gangrenous portion of gut was removed, and after prolonged irrigation with a saline solution drainage was resorted to; a glass tube in the cul de sac, and laterally gauze wicks. The pulse registered on returning from the operating room 136. During the night the wicks in the tube were changed every half hour, but drainage was very scant. Twelve hours after opera-

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tion the temperature was 98, pulse 126, and irregular. Normal saline solution, 600 c.c., was given subcutaneously, and every eight hours until death. Vomiting persisted, the pulse constantly became weaker, faster and more irregular, and he died at 9 o'lock the morning of the 24th, two days after the operation. Temperature did not go above 99.3 until the last few hours before he died, when it registered 101.

In noting the history of these cases I call attention to the relationship of the pulse and the amount of drain. In case No. 1 the pulse steadily fell during the twelve hours following the operation, while the drainage was free, but became weaker and more rapid, when the discharge grew noticeably less.

In case 2 the drain was most unsatisfactory from the first, and the condition grew steadily worse following the operation.

The whole question of treatment of these cases rests in our capacity to thoroughly drain the peritoneal cavity. We cannot rely upon absorption, for the following reasons:

1st. The peritoneum in its normal state does not absorb from all points of its surface. The experiments of Maffuci and Muscatello with pigment injected in the peritoneal cavity shows colored granules in the intrathoracic glands just following the injection. Six hours or more afterward the granules are found in the abdominal glands and organs, but then only in very small amounts. Beck and Auspitz show that in one and one-half hours after such an injection granules could be found in the blood of the ear muscle, and such being the case, there is no reason to believe the granules of the abdominal organs and glands reached them by the blood, instead of the lymph channels. Maffuci showed, however, that the pelvic peritoneum was slowly absorbtive, and gave deposits in the lumbar glands. The absorbing power of the peritoneum lies chiefiy, then, in the diaphragmatic serosa, which is too small an outlet for a diffuse suppurative trouble.

2d. It is a fact that the inflammatory condition which is being dealt with, does not render the general peritoneum more absorbtive, but does interfere somewhat with that function in the diaphragmatic serosa.

3d. If we could turn the discharge from the peritoneal cavity into lymph routes from the whole space the reaction would be tremendous, and death even more speedily supervene.

4th. There is normally a steam in the peritoneum cavity toward the diaphragm, but the cessation of peristaltic movement and marked intestinal distension interrupts this current very appreciably.

The difficulty of draining the whole abdominal cavity becomes apparent when we consider the separate spaces in which purulent discharges may collect:

1st. The greater and the lesser peritoneal space. Then the greater space may in turn be divided into the basin to the right of the ascending colon, and to the left of the descending, that between the mesentery and colon to the right, and also that to the left, and lastly, the pelvic cavity. To drain each one of these areas necessitates a very direct route if we wish to obtain the best results, and this means a number of incisions large enough to allow free escape of the fluids. A median incision may suffice

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for the pelvice cavity and the basins to either side of the mesentery, but lateral incisions are advisable for the space between the colon and the parietes. I believe better results will accrue from incising the wall directly over the area drained, therefore, three on the anterior wall will accomplish more than one median. I believe a drain through the vault of the vagina in the female would be a most advantageous route for outlet of the pelvic basin.

I prefer the rubber tube to all forms of drainage in these cases. Glass is too resistant and may cause injury, rubber does not. Gauze in the cavity is not good, it cannot be cleansed *in situ*, as can the tube, and taking it out with the rointroduction of fresh pieces is accompanied with marked shock in the irregular, rapid, weak pulse of general peritonitis. A small gauze wick in the calibre of the tube is advantageous, as it helps drain by capillary attraction.

It has been recommended that the patient be placed in a warm, sterile bath and allow the abdominal movements to wash out the cavity through the drainage openings. I see no reason why this could not be used, and with success, constantly replacing the bath with fresh sterile solution. The constant irrigation has been proposed, but I see no advantages over the bath. The one drawback to the bath is the necessary fixtures to carry out such a procedure with. Clark has proposed postural drainage for these peritoneal infections, but I am inclined to reject this method of disposing of the inflammatory products. After thorough irrigation of the cavity it is closed without drainage with one or two pints of water remaining. The foot of the bed is then elevated a foot and a half for twenty four hours to allow the gravitation of the fluids toward the diaphragm for absorption. This procedure is inadequate in general suppurative peritonitis.

To sum up, I feel certain that drainage alone offers hope for recovery, and the more satisfactorily it is accomplished the better will be the patient's condition. The rubber tube offers the most reasonable hope of drainage, and the glass and gauze, not as good, should not be used. That drainage cannot be complete unless it is from all the basins in which pus can accumulate. A drainage tube which enters the space to either side of the mesentery may drain the lesser peritoneal cavity by being carried through the base of the transverse mesocolon, the tube being well perforated.

Some time we may apparently have general peritonitis, when, as a matter of fact, it is limited. In these cases irrigation is out of place, as it may spread the infection and render the case hopelessly general. The processes are not limited by adhesions, but rather by time, if I may so express myself. They eventuate in general peritonitis if not cared for quickly. I report such a case next.

D. McL. sent for me December 21st last, on account of a belly disturbance from which he had suffered for several days. He is Scotch; married; laborer, and was in good physical condition. His trouble followed a spree. First he suffered with pain in the right lumbar region, which became general over the right side of the abdomen. Shortly before sending for me he had a sharp accession of pain in the lower part of the belly. I visited him at 5 P. M., and found him with a pulse of 118 and temperature

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of 101; vomiting, restless, belly distended, very tender on pressure over the right and lower portions, increased over the cæcal area, and no peristaltic movements to be heard He was sent to the hospital and operated upon that evening. I found a thoroughly involved appendix, about six inches long, lying in the subcæcal pouch. There had been a rupture at its tip, with an abscess, and also one about one and one-half inches from the cæcum. It was evidently from the latter that the infection extended to the peritoneal cavity. The first impression on opening the cavity was that of a general peritonitis. I removed the appendix immediately, and then with dry gauze pads sponged off the involved loops of bowel. There were no adhesions to limit the process, but those loops of the ileum from the left iliac region showed much less inflammation than those of the right. After careful toilet of the peritoneum with these dry gauze pads I introduced two drainage tubes, one in the pelvic basin, and one into the subcaecal pouch. His temperature increased to 103° six hours after the operation, but fell steadily during the next twelve to 99.2. Drainage was remarkably free, and did not cease to be so for four or five days, and then it grew much less, but the temperature and pulse likewise progresses normal-ward, showing there was no purulent accumulation. The drain was conducted through the original wound, and healed two months after the operation. Just before healing I removed the small suture I had tied the artery of the appendix with.

Here is a case where irrigation I believe would have sacrificed the man's life by causing a general involvement of the cavity. This case, too, brings to mind this point: How shall we ligate vessels when we drain from infected portions of peritoneum? I am sure catgut is too insecure, and silk becomes infected and prolongs the drainage very considerably. I resort to this plan at times, and with success. Tie the vessels, and bring the ends of the ligatures out through the wound with the drainage-tube. There is only one drawback to the procedure, and I saw it exemplified not long ago. If the ligatures are not tied very tightly the distal stump becomes vascular and adherent, and it is impossible to remove the ligatures for weeks unless a small hook can be slipped under the loop, so it can be cut and pulled out. The same condition would exist, however, if the ends were not brought out, and suppuration of months' duration result. It has been suggested that the ligatures be tied in bow-knots with an extra loop of silk under them, pulling these ends which project from the wound will untie the knots, and the ligatures can be easily removed. The best way out of this difficulty is to pick up small portions of tissue to tie with each ligature, and tie very tightly so as to cut through, or, better still, only pick up the vessels, as is done in any other tissue, and do not attempt to tie pedicles or masses. The ligatures come away easily then.

In this last case I expect a hernia, though the wall as yet is strong. The prolonging of a drain through the cut weakens the wound and eventuates in hernia almost always in one who labors. Whenever it is anticipated that the drain must be kept up, it is unwise to direct it through the original opening. It is best to close this and attempt primary union, and drain through a small separate opening made especially for this pur-

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pose and in an advantageous position to drain. These openings are best made with a rather sharp-pointed hemostat after incising the skin and superficial fascia with a knife or pair of scissors. The hemostat simply shoves the tissues aside and catching the rubber tube, pulls it back through the wound. This never leaves a hernia, and gives an efficient drain opening.

G. S., American ; shoe cutter ; single ; age 23, height 5 feet 8, weight 125. Came to the hospital with a tumor in the right lumbar and umbilical region. Operation proved it to be a malignant adenoma of the calcum, which portion of the gut had become invaginated within the colon and slipped up into the transverse portion. I removed the calcum and some of the ascending colon with an inch and a half of the ilium. The glands at the base were involved, and this necessitated the removal of a large portion of the mesocolon, the meso-appendix and the mesentery. There were a number of ligatures used, and the gut reunited by an end to side anastomosis.

An operation of the sort offers opportunity for peritoneal infection, and I felt it best to drain. This was done through a small drainage opening above the anterior superior spine of the ilium on a level with the umbilicus. There was primary union in the large wound, while the drain continued four months in the small. During this time the ligatures used on the mesentery vessels came away.

The silk used in bringing gut surfaces together rarely causes suppuration to be prolonged ; if it makes an exit it is through the bowel. Some time, however, such is the case, and I report one here. Dr. H. who had suffered for some time with membranous colitis, was attacked with symptoms of appendicitis, and came to see me the next day. He was sent to the hospital, and I opened the belly, removing the appendix, which was perforated by a small ulcer. There was an abortive attempt at limitation by adhesions, but the process extended well beyond the immediate neighborhood of the appendix About an inch and a half square of the cæcum wall, to the outer side of the appendix was involved in a gangrenous inflammation. I removed the appendix and invaginated the whole gangrenous portion of the cæcum by a Lembert suture. Drainage through a separate opening was resorted to. There was primary union in the original opening, but a prolonged drain by the smaller one. A month ago, which was six weeks after the operation, I removed a ligature which tied the artery of the appendix, but the wound continues to stay open. Nothing else than the silk used to invaginate the gangrenous area can keep it open, as there is not a fæcal fistula. I made a mistake in not incising the gangrenous portion of gut before I turned it in, which would have given drain by the bowel. During the last month the suppuration has also progressed through the orginal cut, opening it up at its lower end.

In this case I used McBernay's gridiron incision, and the second opening was too close on that account. The infection evidently progressed through the abdominal wall. How long shall we drain, is often an important question to ask. When the discharge becomes clear and odorless it is high

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time to stop the drain. If purulent, drain until all foreign bodies have been removed. Sometimes it is possible that an infection extend from the surface into the cavity and along the tube, and manifests itself after removal of the drain.

R. J. MacC. was operated upon last April for recurrent appendicitis. The appendix was removed, and because the assistant had been careless with a sponge I left in a small drain. In forty-eight hours the tube was draining a clear, odorless serum, and I removed it. He had a chill six hours afterward, and for twenty-four hours signs of suppuration deep in wound with some peritoneal involvement ontlaying the inflammatory focus. It then discharged along the track occupied formerly by the tube, and the temperature returned to normal. Drainage kept up ten days, and the wound closed. The wall is now weak at this point, though his occupation will probably not cause herniation. It is a good plan to introduce a small wick into the tube to dry it before removing it. The elastic tube coming through the tight wall has its contents expressed backward along the track, and if there is any infection of this, suppuration is sure to follow.

Many rules are given in text-books when to drain, such as purulent foci in the peritoneal cavity, bleeding adhesions, raw surfaces, open connective tissues, etc. These rules cannot be followed at all times. It is safe to say that injuries to fresh peritoneal surfaces oftener need drain than injuries to tissues previously involved or chronically inflamed. As a rule, all oozing surfaces should be covered by peritoneum, and vessels should be tied. This offers but little excuse for drain, except in very extensive injury to the peritoneum when it is impossible to control bleeding, except by pack and drain.

Mrs. H. came to the hospital with a large post-operative hernia. Two years ago a tumor of some kind was removed from the wall, the peritoneum being opened by an incision oblique in direction, extending eight inches parallel with Poupart's ligament on the left side. One year ago an attempt was made to remedy the hernia without success. Five days ago I reopened the area and found omentum and bowel tightly bound by adhesions to the large sac. I dissected them loose and tied all bleeding points, which were many. I then closed the cavity without drainage, using silver wire as a permanent suture in the wall.

This brings me to the question of how to close the wall and with what material. When drainage is resorted to it is unwise to close other than by the through and through silk or silk worm-gut sutures which can be removed in toto. When strong walls are wanted and primary union attempted, then there is much selection in methods. Rose writes, "The best method of securing good union consists in uniting the serus and muscular layers by one set of deep, interrupted stitches, either silk or silk worm-gut, which remain buried, and then dealing with the skin by means of a continuous suture. There is no advantage in taking up each layer separately."

Zuncker Kandl writes, "Sutures should be silk or absorbable material introduced in tiers. In the linea-alba the deepest row of sutures included

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the peritoneum only. The second row includes the recti muscles, together with their anterior fibrous sheath. The most superficial layer unites the skin in a continuous manner. In the same way abdominal wounds in other situations are closed by three tiers of sutures."

Price, as much as any one, uses the through and through silk-worm gut, while Kelly likes a prominent suture through the deep tissue and a temporary cutaneous. After all the end is the same, and is best attained by means which allow of prim union of layer to layer from either side. The layering of the sutures is to accomplish this, and usually an absorbable material is used; the inclusion of all but the skin with a permanent suture is to do away with the necessity of the nice care, and yet give a perfectly strong wall, because of the permanent material used as a suture. Perhaps the outcome does not rest as largely with the number of layers separately sutured as with the materials used, and the manner of its use. There certainly is a choice in suture material, silk, silk-worm gut, silver, cat-gut, tendon and ox aorta are all used, but experience had lead me to believe some of these are bad when buried in the wound. Cat gut, however prepared, is not trustworthy, and causes disappointment to the surgeon who uses it to any extent, for he is certain to meet disaster sooner or later.

Mrs. S. P. S., age 54; neurasthenic; no occupation; suffered for some time with frequent and painful micturition, burning in the epigastrium and constipation. An examination revealed a misplaced kidney held upon the sacro-iliac junction by perinephritic adhesion. There was a mild pyelitis, but no stone. I did a nephroraphy January 16 last. A small flap of the fibrous coat of the kidney was removed and the organ sutured to the inner layer of the lumbar fascia where it covers the quadratus lumborum. J. & J. cumolized cat-gut No. 3 was used. The walls were closed with silk-worm gut, which passed through and through, avoiding a nearer approach to the cat-gut than three-fourths of an inch. Temperature remained normal for five days, then it began to rise and went as high as 103. Pain in the wound and epigastrium indicated suppuration, which drained through the wound after forty-eight hours.

I have had four cases of suppuration following buried cumolized cat-gut in the last three months. Tendons and aorta are prepared by manufacturers, and we have to rely upon lay hands to accomplish sterilization. As a matter of fact we have no assurance that all of the sutures are given to us perfectly sterile, and an unfortunate result may follow their use. Besides, these materials are themselves good media for the growth of organisms when softened by the action of the tissues and kept warm by them. There are but three materials which are perfectly trustworthy, and their sterilization is comparatively easy, silk, silk-worm gut and silver. Silver possesses one advantage over the other two in that it is a disinfecting agent of itself, and destroys or inhibits germ-life in the tissues exposed to its action. Extensive suppuration rarely results in a wound held together by silver, and even when the infection has occurred it may subside and the silver suture remain. This is never the case with silk, and once infected this material must come out. I have seen one case of infected silk-worm

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gut where the wound healed up and has given no trouble since, now about four and one-half years. The disadvantage of silver and silk-worm gut is its stiffness, and the necessary sharp ends of the suture.

In the large majority of cases the buried suture should be continuous. In the first place there are not so many knots, and in the second, should infection occur it is an endless siege getting the various stitches out Infection usually takes place from the skin. The precautions to be taken are, never touch a deep suture, neither the operator or assistant. After threading the needle cut off the part handled and the ends used in tying the knot or pulling the stitch tight. The skin sutures may either be continuous or otherwise, though the continuous is quicker, the disconnected is less apt to infect. These superficial sutures should not go into the subcutaneous fatty layer, but be shallowly placed. Remove them by the fifth or tenth day. I have used the subcutaneous suture until I found it dangerous to the welfare of the wound.

I have had six abdominal operations in which suppuration followed the removal of the stitch. A subcutaneous stitch is started at one end of the wound, and carried from side to side beneath the level of the epidermis to the other. When both ends are then pulled upon all surplus is taken up and the two sides closely approximated, the suture being beneath the spin. I used silk-worm gut for the purpose. In every case union was primary and without a sign of inflammation, and the removal of the stitch was from the sixth to ninth day. The day following there usually appeared at one or more points along the line of union a little purplish spot, being a small cavity still covered by epidermis containing a dark colored fluid. If now a wet dressing is applied (the cavity being opened) no further trouble follows as a rule, though it takes some six to twelve days for the wound to reunite. At times when this care is neglected, or sometimes, as in these six cases, in spite of care, the opening increased in size and infection of the deep, permanent sutures occurs.

B. W. operated upon for hernia, which followed drainage of an appendical abscess. Deep silk sutures were used and superficially subcutaneous silk-worm gut. I removed the superficial thread six days after the operation. Till then he had had no temperature; two days later suppuration followed, and for six weeks the wall was open and gave trouble. Last Fall I repeated the operation, using silver wire and interrupted superficial stifches, since then the hernia has not reappeared.

J. H. S. operated upon in November, silver wire was used as a deep suture, and subcutaneous silk-worm gut to close the skin. Two little cavities containing the dark fluid formed, and both were drained immediately. In ten days all was well. One month ago a small superficial discharge was discovered and just within the point of drain was the silver wire; this came away with a slight tug, and the wound healed in seven days. There was no evidence of inflammatory reaction along the line of suture, because of the silver being present. The color of the wire was bright, showing no superficial oxidation, or formation of sulphides, and yet brighter than when

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introduced, indicating some erosion of the surface by the fluids. Sometimes the silver wire, checks such an infection and remains in the wound.

W. S. J. operated upon for appendicitis. No need for drainage and closure of the walls was complete. Silver used in the deep structures. Suppuration followed the removal of the superficial suture and involved the silver. I managed to get hold of the wire which presented in the wound, and after traction cut it off from both ends these retracting within the wound and out of sight. Following this union occurred immediately and since there has been no trouble. Four months have now passed. Two more cases of appendicitis and one of double hernia gave me the same experience with the subcutaneous suture as those just related. I like silk best of all when we can be certain of avoiding infection.

N. H. operated upon three years ago for post-operative hernia, the result of removal of the appendix. A deep silk suture was used to secure the walls and a superficial disconnected silk to close the skin. Primary union occurred, and eighteen months later she gave birth to a first child. There is now no evidence of return. The wall at the point is solid and unyielding.

4318 Olive street.

AT a meeting of the corps of teachers of the New York School of Clinical Medicine, held at the Academy of Medicine, June 21st, 1900, it was decided to wind up the affairs of the school and close it permanently. This action was taken in consequence of continuous interference of the lay Board of Trustees in its affairs.

SOME days since we were favored with an invitation to the annual picnic of the employes of the H. K. Mulford Co., which was held on June 23d at the extensive vaccine farm of the company at Glenolden, Pa. Our inability to be present was a matter of not a little regret, which is accentuated by the report that it was a glorious good time they had. The H. K. Mulford Co. recognize the fact that a contented employe will give better service than any other, and they have instituted their annual picnic, in which the firm acts as host from the time the large company leaves Philadelphia until it is returned to the Broad Street Station, as one means of showing their appreciation of the services of those upon whom they so largely depend for their success in business. It is needless to say that this firm has little fear of strikes, and the wonder is that other employers do not learn the benefits which come from a recognition of the interdependence and an establishment of mutual respect and co-operation between capital and labor.

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Examination of the Blood in Cancer with Microscopical Specimens.

By S. E. Munson, M. D.,

SPRINGFIELD, ILL.

Read before Brainard District Medical Society at Springfield, Ill.

IT HAS not been my intention to prepare a lengthy paper on the subject of blood in cancer. As yet the literature on this subject is scanty, and the investigators have not been numerous. Therefore, I desire only to mention such conditions of the blood as are always present in this disease, that taken in connection with the other symptoms that are usually found are of great value in forming a correct diagnosis.

These conditions are mostly found in other diseases where secondary anemia is present. But there are usually distinguishing features present in suspected cancer cases that are not found in other diseases with known blood changes, such as are noted in blood count, proportions of white and red corpuscles, estimation of hemoglobin and clinical types of corpuscles. Especially is this true in reference to the white blood corpuscle or leucocyte.

In cancer, as in tuberculosis, we are frequently surprised to find but little diminution in the number of red cells. Only when the anemia becomes marked is the count greatly diminished. It is a change of the individual red cells; changes in size and shape (poikilocytosis) in pallor and in the quality and diminished amount of hemoglobin.

However, as the secondary symptoms become more advanced, the anemia may be extreme, and we notice the presence of nucleated red blood corpuscles. This is important in the differential diagnosis of ulcer of the stomach, chronic catarrh and carcinoma. Nucleated red corpuscles are the rule in all advanced cases. Malignant disease differs in this respect from tuberculosis and most other conditions involving secondary anemia, in that the nucleated red cells are much more common in cancer, and may appear even when there is no considerable loss of red cells, or even when the hemoglobin is also normal, so stated by Schreiber. These nucleated red corpuscles are not as common in sarcoma as in carcinoma.

The leucocytes in the diagnosis of cancer are probably of more importance than the red blood corpuscle. The effects upon the leucocytes depends upon the following conditions:

1. The position of the tumor.
2. Its size, rapidity of growth, and the number, size and position of its matastasis.
3. The resisting powers of the individual.

Where there is a polynuclear leucocytosis it always points to carcinoma. Cabot says, "the presence of a leucocytosis is against the benignness of any tumor. That when we are dealing with an obscure, deep-seated disease, if hemorrhage is excluded, the presence of a persistent leucocytosis suggests suppuration or malignant disease, and excludes any simply

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functional or hysterical affection. The absence of a leucocytosis, however, does not exclude malignant disease, though it makes suppuration very unlikely."

In the diagnosis of sarcoma the anemia is never so extreme as in carcinoma, and the leucocytosis is mostly of the mononuclear variety. This should be considered the most important point in the differential diagnosis. We may find a great leucocytosis in acute inflammatory conditions, as pneumonia, pleurisy and suppuration, but in these conditions the red blood corpuscles are normal. A great increase of mononuclear leucocytes are also found in lymphatic leukemia the same as in sarcoma, but are of a greater size, different variety and very greatly increased in count.

In pernicious anemia as distinguished from cancer: 1. The red cells number about 1,000,000 or less per cubic millimeter. 2. The leucocytes are usually decreased. 3. In no disease is there found so many poikilocytes. In typhoid fever and tuberculosis there is no increase in leucocytes.

Cabot mentions a case where a gentleman had gradually and without assignable cause acquired a "lemon-yellow" pallor, without loss of flesh, vomiting pain or any localized sign or symptom. The diagnosis of pernicious anemia had been made. To his great surprise, upon examination, he found over 4,000,000 red cells with 30 per cent hemoglobin and 18,780 white cells, 86 per cent of which were polynuclear. The anemia was evidently secondary, and the autopsy ten months later showed cancer of the stomach. Cabot says, that surprisingly little work has been done on the blood in malignant disease, such cases usually being under the charge of surgeons, who rarely value such investigations.

Haymen considers, that by watching the leucocytes count we can predict the coming or recurrence of cancer before any physical signs are present. It is one of the many points to which the attention of the surgeon should be directed, as well as the physician in clinical diagnosis.

The first slide which I desire to show you is from an old lady suffering from cancer of the liver with large nodules. The liver extending downward to the upper border of the right inguinal region, marked secondary anemia, and even cachexia were present. The red blood corpuscles were greatly diminished in number, and there is a noticeable change in size and shape (poikilocytosis), with great loss of hemoglobin, as can be seen by the diminished amount of coloring matter in the corpuscle. There is present also a marked polynuclear leucocytosis, often as many as ten leucocytes may be found in one field. Normally in an adult person there is only one leucocyte found in from three to five fields.

CASE II.—Boy 12 years of age, with large tumor in left groin. There was no blood count made, but an examination of the blood showed marked anemia, as exhibited by the red cells. The change of the red cells were about as described in the first case, except a few nucleated red blood corpuscles were present. As for the leucocytes, the change is one of entire transformation of the polynuclear to the mononuclear variety. The blood examination alone would have left no doubt of this tumor being sarcoma.

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CASE III.—Peter H., 41 years of age; came to America seven years ago; coal miner. Mother died at sixty from cancer; other family history negative. First saw him March 4th, 1900. Always had good health until last November. Began with loss of appetite and indigestion. Was treated in January by a physician for the stomach, with some improvement, after which he went to work again for a short time, but the trouble returning work was stopped. At this time vomiting was quite frequent, coffee ground in character; absence of free hydrochloric acid noted upon test breakfast. Slight fever, which had been more or less present. Hard tumor, slightly irregular, felt upon palpation in epigastric region, extending into right hypochondriac and downward almost to umbilicus.. Patient had cachexia, with marked secondary anemia. Blood count, red corpuscles 3,650,000, white corpuscles 19,500. The leucocytosis was polynuclear, a few nucleated red blood corpuscles with a marked poikilocytosis. Diagnosis cancer of the stomach.

Odd Fellows Building.

Observations on Certain Early Diagnostic Signs in Measles.

BY GEORGE HOMAN, M. D.,

ST. LOUIS, MO.

Read before the Society of Washington University Medical Alumni.

THE so-called Koplik sign for the early recognition of measles is described as consisting of "round, slightly raised, bluish white efflorescences, having minute red centres, about .01 to .03 inch in diameter, occurring on the inner surfaces of the cheeks, less often upon the lips and rarely upon the tongue, varying in number from six to twenty, though hundreds may be present," these manifestations, it is claimed, being the earliest diagnostic mark of rubeola. Williams, in "Twentieth Century Practice of Medicine," says that this symptom appears on the palate during the second day of the disease.

Some comment has been made on the fact that so pronounced a symptom, which must have been observed by many physicians, should so long have escaped record. The *New York Medical Journal* of August, 27 1898, in quoting from a Nashville exchange mentioned that a claim was made by Dr. G. C. Smith that this sign of measles was a matter of common knowledge among doctors, soldiers and citizens during our civil war. He added that the soft palate was also involved, and seemed disposed to discredit Koplik's claim as a valid one.

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The *Journal* in commenting upon this phase of the matter said that even an old truth reobserved and recorded does not suffer thereby, and it does not follow that the man who hits upon something that was known long ago and has been forgotten was acquainted with that prior knowledge.

It reverts to the subject again in the issue for November 4, 1899, repeating this observation and mentioning the fact that this symptom had been recorded in Danish medical literature, in 1880. But American and English records antedate this publication even, and that the early oral signs of rubeola had not escaped observation is evidenced by the fact that Niemeyer in his practice (Appleton, 1876, Vol. 11, page 528) mentions that Rehn "observed an eruption of pale red, rather undefined spots on the mucous membrane of the cheeks, gums, lips and fauces." And to go still further back in medical literature the Cyclopedia of Practical Medicine by Forbes and others, edited by Dunglison (Blanchard & Lea, 1854, page 53, Vol. IV.,) says in the article on rubeola that the "eruption spreads over the face; spots also may be observed on the palate and fauces."

Having in mind the foregoing and knowing the risk of laying claim to a new discovery I shall venture to call attention to what I am disposed to believe is even an earlier procursor of measles than that disclosed by the oral cavity, as this pointed out, the site being the conjunctival surface of the eyelids.

The examination of an eye for the removal of a supposed foreign body in the person of a child incubating measles (as it turned out) afforded the opportunity to note this condition, which preceded any other observed manifestation of the disease, although its possible significance was not comprehended until afterward.

The suffusion of the eyes, with coryza, sneezing, etc., are the well known obvious earliest recognizable symptoms of measles, the conjunctiva sharing in the involvement of the nasal mucous membrane, as the constitutional development of the disease proceeds.

As observed by me the symptom consisted in minute red points dotting the palpebral surface, but I hesitate to assert the full diagnostic significance of the condition, or its invariability, by reason of insufficient observation, only two cases having been seen at an early enough period to attach diagnostic weight to its presence. If I may do so I would hazard the opinion that they appear probably some hours before the oral symptoms, coincidental perhaps with the photophobia.

It may be that medical literature will show that this is no more a new discovery than that of Koplik's, if his claim shall be succsssfully disputed, in which event it must take its place merely as a revived observation independently reached.

I make mention of the matter at this time to request that those who have opportunity may seek to verify or disprove the accuracy of the observation, and I would especially ask those who are engaged in work among children to bear it in mind and investigate its merit, if such it have, as occasion may be afforded.

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Surgery at the Meeting of the American Medical Association.

BY C. E. BLACK, M. D.,

JACKSONVILLE, ILL.

The sections on Surgery, Anatomy, Obstetrics and Diseases of Women were held on the steel pier and attracted a large attendance. There were fifty-five papers entered for the section on Surgery and Anatomy, and the Chairman, Dr. H. O. Walker, of Detroit, and the Secretary, Dr. Ramon Guiteras, of New York City, had attempted to group them according to subjects. The first session was held on the afternoon of Tuesday, and was opened with the address of the chairman, giving a Retrospect of Surgery of the Stomach. This was followed by a paper on "Non-Perforating Gastric Ulcers with or without Hemorrhage," by Dr. W. L. Rodman, of Philadelphia. These two papers were discussed together.

Dr. Christian Fenger, of Chicago, instead of presenting the paper which was announced on the program, simply made a talk accompanied by several illustrations on the best way of elevating the hyoid bone during anesthesia in certain cases, notably those having ankylosis of the lower jaw. This was an interesting point, although it has a very narrow range of application.

Following this was a paper on the "Removal of mucous membrane of gall-bladder as a substitute for cholecystotomy," by Dr. W. J. Mayo, of Rochester, Minn., and a second on the "Importance of Early Operation for Biliary Calculi," by Dr. M. H. Richardson, of Boston.

The session of Wednesday morning was devoted to the consideration of Diseases of the Rectum and Bowels. Papers were read on this subject by Dr. John B. Wyeth, of New York, Dr. J. B. Murphy, of Chicago, and J. R. Pennington, of Chicago. These were followed by a lively discussion, pro and con, on the best way of establishing permanent fistula, and the difference between operations for permanent fistula by cholostomy and those designed to be only temporary. Dr. Pennington exhibited the mechanical illustrations of his ideas regarding the role which the sigmoid valves play in obstinate constipation and the operative treatment necessary. This discussion was valuable, because it more thoroughly impressed upon the profession the fact, that valves or bones exist in the rectum and colon, and that they have important functions which are not properly performed in obstinate constipation. As for the plan of treatment suggested, the most that can be said is that the matter still remains to be proven. We doubt very much whether the pinching off of a little tissue from the center of one or two of these points will effect a cure in a large proportion of cases. However, the discussion was interesting and profitable.

The afternoon of Wednesday was given over almost entirely to discussion of operations upon the intestinal canal, and especially operations

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for appendicitis. Two papers were read on Appendicitis. One by Dr. Miles S. Porter, of Ft. Wayne, Ind., entitled "Appendicitis: Colitis as an Etiological Feature, and the Operation for Removing the Appendix in two Cases Operated on." This brought out two very different points. First, as to whether appendicitis is often caused by colitis, or whether or not the colitis may not continue to exist and be troublesome even after the removal of the appendix. The second part of the paper considered the question of "Whether the Appendix should be removed in all cases operated on." Dr Porter inclined to the opinion that in some cases it was safer and better to not attempt the removal of the appendix at the primary operation, that in a certain proportion of cases there would be a recurrence, and for this reason it might be desirable to seek out and remove the appendix as soon as the suppurative period was passed. This seemed to be the opinion of the majority of those taking part in the discussion, however, there were a few speakers, notably, Drs. John B. Deaver and Joseph Price, of Philadelphia, who were positive in their practice of removing the appendix in every case operated on. Dr. Deaver's paper was on "Appendical Fistula," and the discussion following was almost entirely confined to two points. First, the old and much discussed question as to whether every case of appendicitis should be immediately operated; and secondly, as to whether in every case operated the appendix should be removed. As is well known, Drs. Deaver, Price and Morris and others recognize positively that every case should be operated on immediately after diagnosis is made, and that in every case operated the appendix should be removed. Dr Nicholas Senn, of Chicago, led the opposition to this view, stating that he believed eighty per cent of cases of appendicitis would recover without operation, and that it was very unsafe and wrong to attempt operation in every case. While we recognize Dr. Senn's standing in the profession as one of its leaders, his discussion on this occasion contains several things that savored of personal pique. To illustrate, he said that he was glad that Dr. Deaver was neither a professor or a teacher. The bringing in of such personal matters certainly tended to seriously wound his argument, and he undoubtedly failed to receive the sympathy of the majority of surgeons present. His discussion was severely attacked by a large number of speakers. The position of Dr. Keen on the subject was far more tenable. While he does not agree that every case of appendicitis should be operated, arguing that a less radical ground should be taken in reference to appendicitis as in reference to all other diseases. His objection was based on the reason that it is dangerous to lay down a single rule or line of procedure for the treatment of any disease. That it is far safer to make each disease a law unto itself, and treat it according to the indications presented in the particular case. He said, however, in the vast majority of cases he should undoubtedly act as promptly and energetically as would Deaver, Price or Morris. We are inclined to feel that Dr. Keen's position in the matter is after all the strongest yet expressed. Drs. Price, of Philadelphia, Dawbarn of New York, Minter of Buffalo, Murphy of Chicago, Gray of Jersey City, and several other speakers fully agreed with Dr. Deaver in regard to immediate operation in every case of appendicitis.

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The third day was occupied in the morning with the consideration of the subject of hernia. Dr. A. J. Ochsner, of Chicago, presented an interesting paper on the treatment of "Hernia in Children." He called attention to the existence of the opening of the inguinal canal, weaknesses of the abdominal wall and hereditary tendency, as predisposing factors in hernia. He called attention to the fact that in children, that if the hernial sac is kept empty and the abdominal pressure is removed, the majority of cases will be cured spontaneously. To accomplish this, the child has to be put to bed and the foot of the bed elevated. The gastric disturbances are carefully guarded.

Dr. M. M. Johnson, of Hartford, Conn., presented a paper on Ventral Hernia. He stated that nearly ten per cent of all abdominal operations were followed by ventral hernia. Drainage, granulating wounds, stitch abscesses, division of the motor nerves; also vitality of the patient and hereditary diseases were pointed to as the most influential factors in causation.

Dr. H. O. Marcy, of Boston, presented a paper on the Cure of Inguinal Hernia in the Male. This paper was largely a restatement of Dr. Marcy's well-known position on this subject. These papers were all discussed together, the discussion was participated in by Dr. W. B. DeGarmo of New York City, Dr. A. H. Ferguson of Chicago, and W. J. Mayo of Rochester, Minn.

Dr. W. L. Willis, of Los Angeles, Cal., presented a paper on "External drainage of superficial lung cavities, with report of two successful cases." His operation consisted simply in locating the cavity and getting into it externally and draining it as one would drain any other abscess.

Dr. Carl Beck, of New York, distributed a large number of skiagraphs and called attention to surgical errors which had occurred from skiagraphs, and pointed out the ways of avoiding such errors.

Dr. C L. Leonard, of Philadelphia, presented a paper on "The diagnosis of calculus disease of the kidney, ureters and bladder by Roentgen Rays." He reported twenty cases in which the diagnosis of calculus was confirmed by operation of necropsy or passage of the stones. He showed that positive diagnosis could be made by the X-ray if sufficient care was exercised.

Dr. B. B. Davis, of Omaha, Neb., had as his subject, "Treatment of Injuries of the Ureter." He reported a case in which the ureter was injured and repaired by what he considered to be a very simple method. The lower end was split up and threaded needles were passed through the walls of the upper end and then through the lower end, and in drawing on the needles the upper end was drawn down and invaginated into the lower.

These papers were discussed by Drs. Kelly of Baltimore, Bevan of Chicago, Bovee of Washington, Goodhue of Dayton, O., Winslow of Baltimore, Beck of New York, MacArthur of Chicago, Summers of Omaha, Neb., and Carpenter of San Francisco.

A paper on "Exstrophy of Bladder, with exhibition of a Case" was presented by Dr. Ap Morgan Vance, of Louisville, Ky., "Surgical Asepsis of Urethra and Bladder" by Dr. Fred. C. Valentine, of New York City, and "Treatment of Prostatic Hypertrophy" by Dr. Parker Syms, of New York City. This completed the work of the session for the third day.

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In the Section on Obstetrics and Diseases of Women, the most notable papers were read on the morning of the third day on the general subject of cancer. The first was the "Prophylaxis and Diagnosis of Cancer of the Uterus" by Dr. L. S. McMurtrie, of Louisville, Ky. He called attention to the fact that there was no symptoms in the initial stage of carcinoma, that pain as a rule does not appear until late in the disease, and that the diagnosis must depend on the symptoms, touch, sight and the microscopical examination of bits of tissue cut away or scrapings from the endometrium.

The second paper was on the "Technique of Vaginal Extirpation for Cancer of the Uterus" by Dr. R. B. Hall, of Cincinnati, O. He strongly advocated vaginal hysterectomy. If cauliflower-excrescences are present uses the cautery to remove them, and does not make a radical operation until ten days later. He prefers twisted silk ligatures, and always removes the tubes and ovaries.

The third paper was "Combined Abdominal and Vaginal versus Vaginal Hysterectomy for Carcinoma" by Dr. John B. Deaver, of Philadelphia. He made a strong point in favor of the abdominal route, by saying that it was the only way in which the pelvic glands could be removed. He considered it very important to remove these glands.

The fourth paper was on "Cancer of the Uterus" by Dr. W. H. Humiston, of Cleveland, O. He laid great stress on the importance of early diagnosis.

The fifth and last paper was on "The Treatment of Cancer of the Uterus," and was presented by Dr. W. R. Pryor, of New York City. He, like Drs. Deaver and Humiston, strongly advocated the abdominal route as preferable in these operations. While he conceded that the mortality of the abdominal hysterectomy was little more than by vaginal, he pointed out that recurrences are much more frequent after vaginal than after abdominal operation, for the reason that by the abdominal route the lymphatic glands and upper third of the vagina could be removed.

These papers were discussed by Drs. Boldt, of New York, Baldy, Massey, Price and Goelet of Philadelphia, and several others. These papers attracted a large attendance at this part of the session.

Hungry Evil in Epileptics.—(Ch. Fèré, *Alienist and Neurologist*, January, 1900.)—Faim-valle is a condition occurring in horses, of imperative desire for food followed by immobility if the appetite is not appeased. A similar condition has been observed in the human. Boulimia is desire for a quantity and pica for a certain kind of food, and neither are associated with the anxiety and loss of consciousness which characterize faim-valle. Under the influence of habit, the condition may occur in hysteria, neurasthenia or insanity, but the form most resembling that in horses is seen in epilepsy. It may occur isolated or as an aura, and the author regards it as an epileptic equivalent, and entirely distinct from the greediness frequently observed in epileptics. Two cases are reported.

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Reports on Progress.

COMPRISING THE REGULAR CONTRIBUTORS OF THE FORTNIGHTLY DEPARTMENT STAFF

GENERAL SURGERY.—C. E. Black, M. D., Jacksonville, Ill.

DISEASES OF THE CHEST—W. W. Bulette, M. D., Pueblo, Colo.

INTESTINAL AND RECTAL SURGERY—S. G. Gant, M. D., New York City.

DISEASES OF THE MIND—Frank C. Hoyt, M. D.

RHINOLOGY AND LARYNGOLOGY—John A. James James, M. D.

GENITO-URINARY SURGERY AND SYPHILOLOGY — Bransford Lewis, M. D.

OPHTHALMOLOGY—J. Ellis Jennings, M. D.

ORTHOPEDIC SURGERY — Phil. Hoffman, M. D.

GYNECOLOGY—Josephine Milligan, M. D., Jacksonville, Ill.

OBSTETRICS—R. B. Murphy, M. D.

MEDICINE — Frank Parsons Norbury, M. D.

CLIMATOLOGY—Hubert Work, M. D., Pueblo, Colo.

PATHOLOGY AND BACTERIOLOGY—Rutherford Gradwohl, M. D.

PARIS CORRESPONDENT — Thomas Linn, M. D., Paris, France.

NEW YORK CORRESPONDENT — E. Franklin Smith, M. D.

LONDON CORRESPONDENT — R. T. Hewlettt, M. D., M. R. C. P., Chief Bacteriological Laboratory, Jenner Institute of Preventive Medicine, London.

MENTAL AND NERVOUS DISEASES.

BY FRANK PARSONS NORBURY, M. D.

Formerly Resident Physician Pennsylvania Institution for Feeble-Minded Children; Formerly Assistant Physician Illinois Central Hospital for the Insane; Physician to Oak Lawn Sanitorium and Passavant Memorial Hospital; Neurologist to Our Savior's Hospital; Lecturer Psycho-Physics, Illinois College.

AND EGBERT W. FELL, B. S..

JACKSONVILLE, ILL.

A Case of Hysteria, with Remarks.—(Fotheringham, *Canadian Pract. and Rev.*, April, 1900)—School girl aged 18; present condition developed after what appeared to be an attack of rheumatism. Patient is well nourished, pulse, temperature, digestive system, circulatory system and genito-urinary system normal. Breathing typically hysterical, shallow and irregular, costal in type, with occasional inspiratory stertor. Nervous System.—1. Intellect. Ideation exalted, disordered; not delusional, but very emotional. Volition unstable and hysterical. 2. Motor Functions. Reflexes exaggerated, ankle clonus well marked. A hysterical rigidity of the limbs was followed by a soft, flaccid condition, and were the seat of odd sensations, being now in a condition of co-ordinated subconscious movement. Hysterical aphonia exists. 3. Sensory Symptoms. Very severe photophobia simulated; hearing very acute. No anesthetic areas and no hyperesthetic, except tenderness over ovaries. Skin reflexes active. Formications were described with much gusto and in great detail. Treatment consisted in: Removal from home to private hospital; nervine sedatives, especially hyoscine and the valerianates of iron, quinine and zinc; and plenty of good food. The patient recovered, but was emotional and easily upset.

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The Mental Element in the Treatment of Headache.—Zenner (*New England Medical Monthly*, January, 1900) calls attention to the great influence of the mind in the cure of disease, especially that of nervous origin. He relates two cases of headache supposed to be of uterine origin, in which gynecological operations gave relief for a short time, and which on post-mortem examination revealed cerebral tumors. The temporary relief was the result of suggestion and not directly attributable to the operation. He says that the narrowing influence of specialism very frequently leads to a misconception of the cause of headache, each specialist referring the trouble to some organ in his particular line.

The Relation of Eye-Strain to Epilepsy, Insanity and Allied Conditions.—Satterwhite (*Medical Age*, April 25, e900) thinks that every institution for the treatment of nervous disorders should have a competent person to examine the eyes of each patient at the time of admission. An excess of expenditure of nervous energy to any one organ is accomplished at the expense of other organs. The eyes are in constant use during the waking hours, and any impairment requiring extra effort to maintain perfect equilibrium will have its evil effect sooner or later. In epilepsy, chorea, etc., every reflex irritation should be removed and nature given a chance to restore lost nerve control. The author cites cases of chorea, epilepsy, insomnia and insanity which were reliexed by removal of ocular defects.

Some Observations on Modern Cerebral Surgery.—Brewer (*Med. News*, December 23, 1899) says that the results of exploratory cerebral surgery have been unsatisfactory. The first condition treated of is traumatism, with or without fracture. Hemorrhage, contusion, laceration of or pressure on the parts, with abscesses, cysts, areas of chronic meningitis or cerebral softening as secondary results, require prompt surgical interference and measures to prevent sepsis. Four cases are reported, one of which died as a result of sepsis, and another from a depression of the cortex. In cases of recent traumatic epilepsy of the Jacksonian type, or where the general form results, operation is advisable, but in old cases where the habit has become established or cortical degeneration taken place, it is of little use. One case of the latter kind is reported, the fits ceasing for a few weeks, but finally recurring. In a case of recent Jacksonian epilepsy of the left arm and hand, relief followed the removal of the depressed bone. Another case in which general attacks followed the local was relieved by operation. A case of tumor of the cerebellum is reported as follows: Man 26 years old; had constant occipital headache, persistent vomiting, marked dizziness, staggering gait, impairment of vision, and did not improve on treatment. Knee jerk gradually disappeared; slight ataxia of the upper extremities and double optic neuritis developed. Recovery followed the removal of a small tumor from the cerebellum, one and one-fourth inches in, near the middle line. In persisting and progressive trifacial neuralgia complete relief can only be obtained by removal of the gasserian ganglion and the intercranial portions of the trunk. In the operation suggested by Hartley, entrance is effected through the temporal bone just above the zygoma. A case of the author's showed no unpleasant effects, except a numbness of the side of the face.

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Eye-Strain as a Cause of Disease.—(Blincol, *Amer. Pract. and News*, January 15, 1900.)—In refractive or muscle error there is a constant strain of the eyes during all the time they are open, resulting in a continuous loss of nerve force. Any of the functional nervous disorders may be due partially or entirely to this cause, and all such cases should have the attention of an expert refractionist.

Hypnotism.—(Dercum, *Medical News*, April 7, 1900).—The hypnotic state is usually divided into three stages: First, catalepsy or sleep with muscular relaxation. Second, lethargy, sleep being deeper and patient remaining in whatever position he is placed. Third, the stage of somnambulism. The author gives the following physiological explanation of the subject. The neurone is the unit of the nervous system. Under certain conditons the relations of these units to each other is changed. During waking hours their processes are in contact, during sleep they are retracted preventing the passage of impulses. In hypnotism the sleep is only partial. To induce hypnotism fatigue of certain muscles, usually the ocular, is produced, and is followed by the suggestion of sleep. All the senses except hearing being cut off, there is no readjustment of impressions by the other senses. Only the first stage is used for medical purposes. Hypnotism should not be used unless the reasons are obvious. It is of little use in therapeutics, the pathological cause not being removed and its practical application limited to hysterical and neurasthenic patients. In hysterical patients suggestion without sleep is as efficient and much preferable to hypnotism.

A Case of Post-Epileptic Amnesia.—(Marshall, *Medical News*, February 17, 1900)—The patient, aged 22, is unmarried; her father had been a heavy drinker for many years; mother healthy, but nervous; one sister has always had chorea. Except for the diseases of childhood was healthy till she began to menstruate at the age of 12. At 16 she had fainting spells and occasionally convulsive attacks, consisting of a stiffening of the limbs and muscles of the face, lasting one or two minutes. They were not preceded by aura or followed by hebetude or sleepiness; there were no stigmata. These attacks have persisted and occurred every week or two, being more frequent at the menstrual period, or after exertion or excitement. During the last part of October, 1899, the patient suffered from dysmenorrhea and pain in the ovarian region. On November 3 she had a fainting attack, and on attempting to arouse her she became violent. She talked rapidly and incoherently, had no knowledge of her surroundings, and did not recognize her mother and sister. As she was extremely violent a half grain of morphine was given, which quieted her for some time. After the third day she talked and laughed with her friends, but imagined she was at school, where she had been when fifteen years of age. She had utterly forgotten every impression received since that time. On the tenth day she became rational and had no recollection of any incident which had occurred during her illness.

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Society Proceedings.

BRAINARD DISTRICT MEDICAL SOCIETY

Meeting at Springfield, Ill., April 26, 1900.

This Society met at the City Hall in Springfield, April 26, 1900. In the absence of the President and Vice-President Dr. Lowrie was called to the chair. Members and visitors present during the day were Drs. Barger, Glenn, Hairgrove, H. C. Hill, Kreider, Lowrie, Miller, Munson, I. Newcomer, Shipp, Bowcock, Southwick, Kelly, Taylor, Dixon and others from the city.

Minutes of previous meeting were read and approved.

Applications for membership were received from H. W. Smith, of Roodhouse, College of Physicians and Surgeons, Chicago, class of '94, recommended by Drs. Norbury and Adams; C. M. Bowcock, of Springfield, Jefferson Medical College, class of '82; Geo. E. Southwick, of Beamington, Miami Medical College, Cincinnati, class of '92; and J. W. Kelly, of Springfield, Northwestern University Medical School, Chicago, class of '97, all recommended by Drs. Kreider and Taylor. The applications were referred to a Board of Censors *pro tem*, consisting of Drs. Kreider, Newcomer and Hairgrove, who reported favorably, and by motion, the Secretary was ordered to cast the ballot of the Society for their reception as members.

The Secretary presented her annual report. Seven have joined the Society during the year. Thirteen are in danger of suspension for nonpayment of dues, and one, Dr. W. H. C. Smith, has withdrawn, having left the district. The Committee on Program has been very efficient and successful. At every meeting excellent programmes have been given. The attendance has not been what these merited. The finances are in good condition, the balance in treasury having increased $7.65. We have made in the past ten years a net gain of fifteen members besides those that may be reclaimed from those under suspension. Then we were slightly in debt, now we have in treasury $56.57.

On motion, the Secretary's report was accepted.

The Treasurer's report was read by the Secretary. The year's expenses have been $32.85, and the balance as given by the Secretary's report, was accepted as read.

Bills of expense for this meeting and Secretary's salary were allowed.

On motion, the Secretary was directed to furnish a report of our meetings to the *Illinois Medical Journal*.

By consent the election of officers was postponed till a later hour in hope of a larger attendance.

Dr. Kreider gave an informal report as the recent organization of medical societies, showing how the work of the State Society is helping in this direction.

In the absence of Dr. Servoss, of Havana, his paper on "When shall we use forceps?" was read by the Secretary. The paper advocated the frequent use of forceps in otherwise normal labors where the head is slow

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in passing the soft parts, contending that such delivery under chloroform, and with the head somewhat compressed by the forceps, is less apt to cause a laceration than the natural forces, and that the saving of long suffering for the mother is a very valuable feature, meaning much to the patient, and ultimately very helpful to the physician's reputation. The frequency of arrest at the floor of the pelvic is probably due to the fact that women now so generally wear a splint to enable them to maintain the erect position, so that the abdominal muscles waste and cannot extrude the foetus without aid. In fourteen years' use of the forceps on these principles I have never lost such a case, nor even had a child-bed fever occur. Chloroform should not be given till the head is well through the bony pelvis. Then it may be given moderately till delivery, giving it to complete anesthesia if forceps are used.

Discussion.—DR. KREIDER.—The suggestions of the paper are good except as to the safety of such frequent use of the forceps where the delivery is a matter of more time simply, and neither mother and child in any risk. In such cases a change of position will often hasten delivery, and we are not warranted in using forceps where there is no more positive indication than moderate delay.

DR. DIXON.—The advice of the writer is certainly extreme, and could not be safely applied under the conditions of city practice. Where forceps must be used the axis-traction forceps should be used. The ordinary forceps often does harm even in the hands of quite good practitioners. The axis-traction principle may be applied to the ordinary forceps cases.

DR. SHIPP.—Forceps are seldom needed. Women should not be encouraged to call for them so readily. Often a determination to get through without them would render them unnecessary, as the woman would use her own powers more efficiently.

DR. LOWRIE thinks the writer extravagant in his use of forceps.

On motion, the election of officers was taken up and following nominations the Secretary was ordered to cast the ballot of the Society for the following persons for the offices indicated: President, J. L. Lowrie, of Lincoln; Vice-President, S. T. Hurst, of Greenview; Secretary, Katherine Miller, of Lincoln; Treasurer, Chas. C. Reed, of Lincoln; Board of Censors, A. G. Servoss, of Havana; A. L. Brittin, of Athens; C. E. Black, of Jacksonville.

Dr. Hairgrove was called to the chair while the President read his paper on "Pulmonary Consumption and its Treatment in the Climate of Central Illinois."

The case of M. F. will illustrate the thoughts I wish to present as to the management of this dread disease. This lady consulted me September 10, 1899, for what seemed a slight bronchial irritation, which yielded promptly to treatment. On October 9 I was again consulted as a sequence of a slight cold. On physical examination I found a considerable area of

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dulness in the left lung, about one inch above and to the left of the nipple. I also noted the following personal characteristics and history: patient, a blonde, aged 28, single, height 5 feet 5 inches, weight in health 118 lbs. (On October 20 she weighed only 102 lbs., a loss of 16 lbs. since September 1.) Parents living and well, aged 77 and 73 years. Of their family of twelve children four boys and four girls had died from children's diseases, between the ages of one and fourteen. The two living sisters of my patients are in good health, aged 37 and 42 years. Other collateral branches of the family show an excellent record. The fifth brother died of consumption six years ago following an attack of la grippe, after a sickness of about nine months. Intelligent treatment, combined with change of climate, had no lasting beneficial effect in his case. My patient was his nurse during the latter weeks of his illness. Could her disease have been contracted from her brother and lain dormant until the debility caused by the slight attack of bronchial catarrh favored its development?

Treatment.—Good ventilation in living and sleeping rooms; much time in the open air; wool flannel next the skin at all times, varying the outer clothing with every change of the weather; gymnastic exercise and salt water bath followed by brisk rubbing every morning. She was allowed to eat what appetite craved. Internally creosote was given in increasing doses from ten to thirty drops three times daily. The latter dosage has been maintained since October 20, except three weeks when she took five-grain doses of guaiacol carb. She has also taken tablespoonful doses of cod liver oil after meals with syr. of hypophos. and elix. lacto-pep. comp. Codeine has been given to control the severity of the cough.

Results.—Increased appetite; a gain of nine pounds in weight; lessened expectoration, and cough, and improved character of sputum; diminished area of dulness and greatly increased chest expansion during inspiration. There is now good rest at night, only occasionally broken by coughing. Night sweating has almost ceased. Menses are regular every twenty-five days with improved quantity and quality. Temperature ranges from normal to .2 above in the morning; pulse 78 to 82; bowels regular, eyes bright, skin, lips, ears and finger-tips normal. While the success (not yet complete) in one case cannot decide an entire plan of treatment, yet the degree of success obtained at this changeable season indicates what I believe may often be obtained by treatment along these lines without sending the patient away from home.

Discussion.—DR. DIXON.—Was there a microscopic examination of the sputa in this case? The treatment is the best method known at present. Creosote and guaiacol carb. are most satisfactory remedies. Pure cod liver oil will not be assimilated beyond a very moderate amount. Probably any dose above one drachm will be found in the fæces.

DR. KREIDER.—In some cases most surprising results have been secured by such treatment as suggested. A case recently at the hospital was brought there because it was impossible to get fresh air for her at home. The temperature was treated as for ordinary fever. The nebulizer was used with antiseptics. She is now much better. Creosote not agree-

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ing, malt-nutrine was used. Her temperature is now less than 100° in the evening.

DR. HAIRGROVE.—Fresh air, sunshine and nutrition are the great factors. It is doubtful whether creosote has any specific effect, but it does stimulate nutrition. Tuberculosis is very common. It often is found in post mortem examinations where it had never been suspected during life. Inhalations help by improving the conditions of the sputa and of the bronchial mucous membrane. They are probably not specific in action.

DR. NEWCOMER.—Liquid peptonoids with creosote is a very valuable combination. Patients improve, but do completely recover if the condition is general.

DR. BARGER.—Some forget that pure air is as important at night as in the day. Patients are often benefited by sleeping out of doors.

DR. KELLY reported a case in point. The patient seemed in fair health, but half the left lung was consolidated. Guaiacol carb., 7½ grains thrice daily failed, but creosote carb. helped. A child, age 5, had always had winter cough. He probably had tuberculosis of the bronchial glands. Liquid guaiacol relieved him of all his symptoms. Phospho-albumin is as good as cod liver oil and less disagreeable.

DR. TAYLOR.—The diagnosis is often made too late. People often recover without their condition having been recognized. The process becomes arrested, if not cured. In cases of slight recurring fever without obvious cause do not omit to examine for tuberculosis. A woman with tuberculosis of the glands of the neck, of which four or five have suppurated, has been taking creosote, and has good general health, and had gained 20 pounds.

DR. LOWRIE.—There was no microscopic examination of sputa. My patient was kept out of doors three or four hours daily in spite of the protests of her mother, who finally seeing the results, became a convert to that method of treatment. We often send patients West, forgetting that the benefits of fresh air here are not half utilized.

The paper of DR. S. E. MUNSON, of Springfield, on "Examination of the Blood in Cancer" was then presented with microscopic slides illustrating the conditions mentioned. (See this issue of the MEDICAL FORTNIGHTLY, page 403.)

DR. BARGER, of Hopedale, read a brief paper on "Defecation—Natural and Artificial." He referred to the importance of regularity in this necessary natural function and its proper management in order to avoid rectal disease. Prolonged sitting in the closet is a prolific cause of local congestion and its consequences. Constipation, the most common derangement of function, can be largely controlled by diet, regular habits and by not allowing the passage of gases except at defecation. The practice of prolonging the stay at the closet for any reason should be avoided; the best convenience should be secured and used quickly. It is claimed that one-fifth of the human family have some kind of rectal disease. We should

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oftener search for trouble here, and proper advice as to these ailments would prevent much serious disease. Rest is as essential in the cure, and this can only be secured in these cases by artifical defecation. I have now a patient who has not had a natural evacuation for sixty-nine days. He had suffered from hemorrhoids for over thirty years, and after every natural defecation had to sit on a hard seat for an hour or more to rest the parts and prevent prolapsus. After artificial defecation with my apparatus he gets up immediately and walks and works with no inconvenience whatever. We need this measure in typhoid and other low fevers, after surgical operations and fractures of the lower limbs, in accouchment cases. The patient's bowels may be moved daily without effort or risk of soiling the bedding, clothing or nurse. It can be used in any case where the indications are to leave the patient or the lower parts of the body at entire rest, or where natural defecation cannot be performed easily and safely.

Owing to the approach of the dinner hour discussion of these papers was omitted.

Drs. Lowrie, Barger, Hairgrove and Taylor were appointed delegates to the approaching meeting of the American Medical Association, and the President was authorized to add to the list others who might intend to go to the meeting.

Drs. I. Newcomer, M. Lee and C. M. Bowcock were appointed Committee on Programme for the ensuing year.

Drs. Black and Munson were appointed Committee on Microscopy.

On motion, Society adjourned for dinner.

At one-thirty most of the members in attendance with several other physicians met at St. John's Hospital, where a very interesting clinic was presented by Dr. Kreider, who showed a large number of cases of various forms of tubercular disease, including several hip joint and spinal cases. Several very interesting cases of conservative treatment of severe injuries were also shown.

All details as to the July meeting were left to the Committee on Programme.

KATHERINE MILLER, Secretary.

Anemia, with constipation and painful or difficult menstruation (dysmenorrhea):

℞ Ferratini..... dr. ii
Rad. rhei pulv..... dr. iv
Sodii bicarb..... dr. ii
Ol. foeniculi..... gtt. xxx

M. S. Take a teaspoonful at night, in a wafer or dry in the mouth, and wash down with a draught of water.

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MEDICAL MISCELLANY

I have frequently prescribed Dr. McArthur's syrup of hypophosphites, and have found it to be a therapeutic agent of great value in the treatment of many diseases.

O. G. CILLEY, M. D.,
Surgeon-General, Mass.

New Through Sleeping Car Line Between St. Louis and Denver via Missouri Pacific and Rock Island Route, in effect June 1st. This is the shortest and quickest through car line between St. Louis and Denver. Train leaving St. Louis 9:00 A. M. daily, arriving at Denver 11:00 o'clock next morning.

Relief of the British-Boer War Sufferers.—Americans have followed with interest the mission of the hospital ship "Maine" to South Africa. It is pleasant to know that St. Louis was represented in her equipment by the presence of thirty-six dozen ounces of the antikamnia preparations, this amount having been contributed by the Antikamnia Chemical Company through their British agent for the relief of British Boer war sufferers.

WE take pleasure in calling our reader's attention to the practical little book on infant feeding offered by the Maltine Company. The book is very nicely gotten up in serviceable form and binding, the subject-matter is unquestionably valuable. The summer months are the hard months for the babies, and while the physician should at all times be mindful of infant diet, it is especially important that he be master of the situation during the heated term. The Maltine receipes will be found of material assistance to this end.

The Hygiene of the Asthmatic.—Jack in the Buffalo *Medical Journa* of January, 1900, says, that as asthma is the result of an abnormal blood biochenry, the treatment should be such as to produce and maintain a normal blood biochenry. This he does by hygenic methods. First in importance is the diet; the asthmatic should not be starved, but should be given an abundance of such foods as are rapidly assimilated and readily oxygenated. The accustomed diet should be changed gradually. Hot water with milk and salt should be substituted for coffee and tea. Meats, starchy foods and fruits should be given, also foods rich in alkalies, to increase the alkalinity of the blood. Eat slowly, frequently, much and a variety. Baths are next in importance. Cold water baths accompanied by friction improve the oxygen absorbing and carrying properties of the blood, by an increase in the cellular elements, and also diminish the quantity of acid phosphate and increase alkalinity. Sunlight has a decided influence over the blood of the asthmatic, and the baths should be taken, when possible, in the sunlight. An increase in altitude causes an increase in the red blood corpuscles, but the asthma usually returns unless the hygienic treatment is instituted. The habitual use of alcohol should not be allowed. Tobacco smoke changes the oxyhenoglobin into carbonic oxid hemoglobin, a stable compound not reduced in the circulation, and should not be allowed at any time. Patients should avoid malarial districts.

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Cholera Infantum.—Dr. A. E. Chatfield, of Cleveland, O., says:

No subject is more important, especially at this period of the year than that of infantile, intestinal disorders, usually caused by the intense heat of summer, dentition, improper diet, and unsanitary surroundings. As physicians, we are called upon to combat that disease so dreaded by mothers—cholera infantum, it generally occurring in the poorer classes where alas so often such a thing as asepsis is unknown. I wish to report to you some cases that I have been treating in which I used with great success, Glyco Thymoline (Kress).

Aggie McK—, age 14 months, cutting four teeth, taken suddenly sick in the night with colicky pains, vomiting and purging pulse 140, temperature 104 degrees; the stools in a few hours becoming copious, musty odor, greenish in character; the treatment at that time was mustard paste to abdomen and mild purgative. The next day I prescribed standard drugs, but the bowel trouble did not abte; she kept on in the same manner, growing weaker and becoming emaciated. On the fourth day I commenced using Glyco Thymoline (Kress) with equal parts Liq. Bismuth, teaspoonful every two hours; it acted like a charm. After two doses could notice a change for the better and in three days the child was convalescent.

Walter S—. 4 months old, delicate, nervous, irritable from birth, had been suffering from cholera infantum for over a week when I was called to see him; he had wasted to a mere nothing—eyes sunken, semi-comatose, skin clammy, bowels moving every few minutes; ordered an enema of warm water with one ounce of Glyco Thymoline (Kress) to pint. Administered internally

Bismuth Subcarbonas	Dr.	I
Spts. Myristicae	Min.	XX
Spts. Vini Gallici	Dr.	III
Glyco Thymoline (Kress)	Oz.	½
Mistura Creta, q. s. a. d.	Oz.	III

Misce—Sig. Teaspoonful every three hours.

The next morning when I saw him, there was a slight change for the better and the bowels were not so active; same treatment was kept up; there was a gradual recovery in three or four days, the stools were normal and other symptoms had disappeared. I sent him to the Fresh Air Camp, giving the mother a bottle of Glyco Thymoline (Kress) with directions to use one-half teaspoonful diluted three times a day. The child is picking up nicely.

John T—, two months old baby, typical case of cholera infantum, had small hopes of saving the little one; put him on equal parts of Liq. Bismuth and Glyco Thymoline (Kress), one-half teaspoonful doses every three hours. It controlled the vomiting and regulated the bowels and the child made a nice recovery.

I have also used Glyco Thymoline (Kress) in syphilitic sore mouth, ulcerative stomatitis and hemorrhoids, and find it a splendid palliative. The results obtained were entirely satisfactory both to myself and patients. I shall continue to use it in my practice.

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The Medical Fortnightly.

Issued Tenth and Twenty-fifth of Every Month by the Fortnightly Press Co.

UNDER THE EDITORIAL DIRECTION OF

FRANK PARSONS NORBURY, M. D. AND THOS. A. HOPKINS, M. D.

Secretary: CHARLES WOOD FASSETT, M. D.

A COSMOPOLITAN BIWEEKLY FOR THE GENERAL PRACTITIONER

Editorial Offices in St. Louis, Chicago, Cincinnati, Jacksonville, St. Joseph, Kansas City, and Pueblo, where specimen copies may be obtained and subscriptions will be taken.

Address all business communications to the Fortnightly Press Company.

Address all contributions and books for review to the Editors, Suite 312, Century Building, Saint Louis.

Paris: U. S. Press Building, Espanade des Invalides, Paris Exposition.

Volume XVIII **JULY TWENTY-FIFTH** **Number 2**

Editorial Department.

Honest Medical Journalism.

THAT "honesty is the best policy" is a truism long since verified in the actual experience of life. It is as well founded as the rock of Gibraltar, and as permanent as the heavens. When applied to medical journalism the same inevitable results are in evidence. Hence, the conclusion that an honestly edited medical journal is sure to be right, if it follows in the line which the accumulated experience of life has thus emphasized. To judge as to the honesty of a journal's mission is not always within the power of the man who judges from the outside. It is easy to surmise; to criticise, and even be arrogant in assumptions, but it is another thing, or, as Kipling says, "that is another story," to say an editor is dishonest, not reliable, when forsooth the original columns, the editorial comment, and the advertising pages of his journal differ from those of his contemporaries. We admire the staunch, rib-rocked energy of many of the clan, who hit hard, and to count at the frauds apparent and real in the medical advertising of today, but lest we forget, do not let them rest in assurance that they judged by others may not themselves be given to mockish pride, self-assurance and a selfish, unjust censorship, which some day will come home to roost.

It is absurd for the *St. Paul Medical Journal* to assert that there are only twelve honest medical periodicals in the country. We presume these holy periodicals are edited by the twelve apostles, and all others belong to the Devil and his angels, and are probably published in Inferno. But as yet Hiprah Hunt in his journey through the Inferno has not met them, but he has gazed upon the shriveled souls of those who were wont to belittle others when on earth. (See July *Cosmopolitan*, page 336.) How presumptuous some editors are, and how quick to arrogate to themselves all of the good things in sight; imagine themselves a triumphal arch carved in marble; in other words, the real thing, and to say all others are baseless imitations stuff and nonsense. We would say be merciful and remember your saintly namesake, St. Paul, ere you play saint, while the others, for there are others, go off to sin no more.

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We have been a reader of 250 (more or less) journals published in this country long enough (about twelve years) to arrive at some conclusions *ourselves*. We are not among the *original saints*, but we have some of the ear-marks of an honest devil (if such a being exists), and we dare say that even old Saint Louis would turn over in his tomb if his family traditions were questioned. But, never mind about him, we are living in the present, and, as we were about to say, believe in the innate integrity and honesty of man, even though he be a medical editor. Medical journalists, like politicians, are not all scoundrels, there are some who do not hold stock in the ice trust, and more than twelve who are not subsidized by the proprietary medicine octopus. Perhaps they do not belong to the holier than thou party, but nevertheless they run at large, and thus far have escaped the rogue's gallery, and will be on hand and risk their chances when St. Peter rounds up the editorial brethren including the saintly twelve.

F. P. N.

Appendicitis a Surgical Disease.

THE ever interesting subject, appendicitis, was once more prominently before the profession at the recent meeting of the American Medical Association. The discussion had its startling climax in the expression of extreme conservatism made by a prominent surgeon who failed, however, to hold his position, and retired before a more elaborate explanation could be obtained from him. However, the concensus of opinion of the men who are seeing most of the cases of appendicitis, and who are best qualified to give an authoritative expression, is that appendicitis is a surgical disease. This seems to the writer the inevitable opinion of all who will conscientiously study the pathology of the disease. It is well, no doubt, until the question of "when to operate" is settled, for us to be reasonably conservative, remembering that all cases are not operable. But we should bear in mind that the few cases recovering without operation, should not be the criterion for all cases, nor should the few who die as the result of operation be the measure for all operations.

Richardson, of Boston, who has had the largest clinical experience in the world in the treatment of appendicitis, says: "As a rule the appendix should be removed if the diagnosis is made in the first hours of the attack." After the early hours, operation is advisable in the following cases: First, if the symptoms are severe, and especially if they are increasing in severity. Second, if the symptoms, after marked improvement, recur. Third, if the symptoms, though moderate, do not improve.

It seems, that in the light of the experience of such men as Richardson, Murphy, Morris, Keen, Henrotin and others, appendicitis is, essentially, a surgical disease, but that all cases are not to be put under the one rule, to operate in every case. The operable cases demand early diagnosis, and there is, perhaps, in all cases a time for operation when all will recover, but it requires good judgment and early diagnosis to say just when this time occurs. It unquestionably is better to operate early, even

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in simple cases, than to procrastinate, and even if the patient recovers the chances of further attacks still remain as a hazard to complicate matters. Better a live patient with the removal of an apparently normal appendix, than a dead patient with the feeling of being too late in removing a diseased appendix.

The question resolves itself, primarily, whether or not appendicitis is a surgical disease? We believe it is a surgical disease, and our own experience teaches us that diagnosis should be made early and operation follow early, if we expect to combat complications and death. F. P. N.

The Crime of the Century.

IT IS with a feeling of abject horror that we read of the atrocities committed in China. The details of this awful tragedy leaves no doubt in the minds of the people that the Chinese nation is the one foul spot on the globe which needs the influence of Christian civilization to make it clean. The years of self-sacrificing toil of the missionaries who have valiantly worked among these heathen to bring into their lives the wholesome and beneficent blessings of civilization have, seemingly, with one terrible murderous sweep, been lost in the greatest gore of the greatest crime of the century. With abated breath this Nation has watched the telegraph columns of the press, hoping that the rumors were not true that the foreigners had all met with the cruel fate of murder. At this writing all hope has been abandoned, and at all probability the worst has happened. The civilized world has suffered, and to meet this horrible situation will require the wisdom of the most experienced diplomats. As the *Chicago Record* well says:

"In Europe, as in this country, it is felt that there can be no backward step until Pekin has been taken, until order is restored throughout the Asiatic empire and some assurance is secured that never again will China be able to set the civilized world at defiance. This necessarily involves a sweeping change in a land where changes have been unknown. The oldest nation on earth, with a population numbering approximately a fourth of the world, is to be torn from its immemorial traditions and replaced on a new plane. Somehow out of the present struggle Chinese civilization, such as it is, is to be re-created and established on new lines.

"The United States is prepared, in common with the other powers, to accept its share in the world's work. The case may be placed safely on the highest moral grounds. The massacre of Americans at Pekin does not call for blind vengeance; it does call for such exemplary and retributive measures as shall make a repetition of the crime forever impossible. So long as the government proceeds with this end in view, sending a sufficient force to China and acting in harmony with the other powers toward the common end, it need not fail to have the support of the American people.

If, moreover, when the time comes for the final settlement of China's destiny, the government has pursued a course which will enable it to start aloof from all territorial scrambles, neither seeking to favor any power nor

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to acquire territory for itself, a great opportunity may lie ahead of us—an opportunity to gain for this republic such an authority, prestige and moral dignity and influence as will be worth more to it than any amount of territorial aggrandizement. Precedent, geographical position and its past independence mark this nation as the one which fairly might assume to act as friend to both Russia and Great Britain, to Germany and Japan. If it preserves those friendships it is yet possible that the horror of a universal war might be avoided solely because this nation had set its influence to prevent it.

"With the exercise of wise statesmanship it is not an unreasonable expectation that the close of the war may find in session at Washington such a court of arbitration as the world has never seen, the United States acting in the high role of the world's arbiter and the sponsor for peace at a time when the breaking of peace must mean universal conflict."

Give Us This Day Our Daily Rake Off.

The Comstock Collection Agency, of Oswego, N. Y., has discovered pay dirt equivalent to that on the beach of Cape Nome, in the following contract, which physicians are signing under the plausible solicitations of sauve agents, sent to work this little game on the unsophisticated physicians of this country:

No. 1A. The signer must receive from agent Agreement
20 s. No. 2b at time of signing this agreement. .....190..

For Value Received, I promise to pay to The Comstock Collection Agency Thirty Dollars for three years' subscription to said Agency, at their office in Oswego, N. Y., on the following conditions: I agree to send to said Agency *within twenty days* from this date the names, correct postoffice address, and amounts due from each of at least twenty debtors living in the United States or Canada who owe me accounts or notes legally due amounting in the aggregate to at least One Hundred Dollars; *also to continue sending, at intervals not exceeding twenty days, to said Agency, the names of all said debtors who do not pay their indebtedness, until all of said Agency's letter forms, which are five, shall have been sent to each delinquent debtor, and to send two two-cent stamps with each name on each list at each time.* The first moneys received on said claims up to said sum of Thirty Dollars I agree to send, within five days after their receipt, to said Agency, by check, draft on New York, post-office or express order. *Should I fail to comply with above conditions, I agree to pay to said Agency said sum of Thirty Dollars within ten days after default.* In consideration of the above agreement, the said Agency agrees to furnish, upon request, a sufficient number of blanks for the purpose of sending the names of said debtor, and, when the subscriber has conformed to said agreement, to send its letter forms in proper order to each debtor named in each list. After the subscriber has sent the Agency his first list of names, in compliance with this agreement, he, the subscriber, is to have the privilege of send as many more names, and at as frequent intervals as he desires, during the term of his subscription to said agency.

No agent in the employ of The Comstock Agency has the authority to change the terms of this agreement.

It is a contract that on the face of it is as unpretentious as a Quaker bonnet, but inspection shows a twenty-day clause, which sooner or later catches the average physician like a steel-trap, because he will forget to send his list some day, and as this contract sets no limit to time, which we all know is longer than a piece of string, then the twenty-day clause becomes active and the catch is made. It is a contract that does not need varnishing to bring out its fine points, or prevent it from spoiling, although it certainly ought to warp Comstock's conscience when the daily rake off from scared physicians drops in on his desk. He is used to it—he is no spring, boneless cod. No! we opine that he has a motto over his ataxic

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typewriter that reads, "God Bless the Suckers;" another over his cuspidor (he must certainly have a cuspidor, now that the coal bucket is put away), which reads, "Give Us this Day Our Daily Rake Off."

He rakes in the coin, while his gentlemanly, sauve, advance agents of prosperity, endeavor to work some of the old gags of the old-time book-agent in their endeavor to get signatures to the contract. The physicians in Illinois and Missouri have probably met the man who, like Mr. Barnes, "is from New York;" his jokes, like those of Bret Hart's mule driver, have "a care-worn flavor;" he smiles like George Ade's "Artie," but with all makes one feel at home, just like other gold-brick schemers do. After he gets your signature he departs like a cable-car that has found its trolley. Comstock does the rest, excepting to ask you to pay postage on all of his correspondence. He is not like Jones of Elmira, whose advertisement, "Jones, he pays the freight," made him famous. No! Comstock asks you to cough-up, and unless you do he refuses to send out your letters. Again, when the time limit, twenty days are up, he expects you to cough again, this time in a more effective broad-side, and unless you do he reminds you of a Bogie-man that lives in the next township. His scheme works like fly-paper. We will write more another time. F. P. N.

THE University of California will be presented with a complete outfit for the department of medicine by Mrs. T. B. Hearst.

A JEWISH HOSPITAL will be erected on a property near the Masonic Home at an early date. The association having its erection in charge promises that it shall be a better hospital than any now in St. Louis.

DISEASES OF THE LUNGS AND PLEURA.—We are pleased to announce that Dr. Albert Abrams, of San Francisco, has favored us with manuscript copy for a series of papers on "Diseases of the Lungs and Pleura." The first number of this excellent series will appear very soon, to be followed in rotation by others, until all of these valuable papers are published. Our readers are familiar with the literary genius of Dr. Abrams, as shown in the "Scattered Leaves from a Physician's Diary," published by us last year. The clinical work of this gifted versatile author is of the same high order, and we, therefore, bespeak for our readers a warm appreciation of the practical value of Dr. Abrams' clinical monographs.

THE problem of overcrowding in the medical profession has been settled by the Russian government in a way which could only be adopted by an absolute monarchy, but which will be no less effective in accomplishing the purpose intended. By a decree of the Minister of Education, admission of first year students to the several medical colleges is restricted to the following number: The University of Moscow, 250; Kieff, 200; Charkow, 175; Dorpat, 150; Warsaw, 100; Tonisk, 120; and Kasan, 100; a total of 1095. Allowing that seventy-five per cent complete the course and are graduated, this would mean the equipment of only about 725 each year to fill the depletions in the ranks of regular practitioners resulting from death and desertion.—*The Physician and Surgeon.*

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The Reviewer's Table.

Books, Reprints, and Instruments for this department, should be sent to the Editors, St. Louis

THIS, the eighth edition of this well-known work which has for many years been a favorite with medical students and practitioners, has been thoroughly revised and brought up-to-date in its text. Forty-one new engravings have been added to the already rich series of illustrations. Taken as a whole it is the best manual of obstetrics of today, and this deserving popularity has been won by the comprehensive style, clear text, and trustworthy attention given by the author in its preparation.

A MANUAL OF OBSTETRICS. By A. F. A. KING, M.D., Professor of Obstetrics and Diseases of Women in the Medical Department of the Columbian University, Washington, D. C, and in the University of Vermont, etc. In one 12mo. volume of 612 pages, with 264 illustrations. Cloth, $2.50, net Philadelphia and New York: LEA BROTHERS & CO., Publishers.

THIS book covers the traumatisms of the eye as met with in the ophthalmological practice considered from a medico-legal standpoint. It is a valuable book, even though its field which is important, is limited. The chapters on simulation should be read by all U. S. Pension Examiners. The chapters on medico-legal expert testimony are practical, and should be read by all physicians, who are, in a legal sense, experts when they testify on medical subjects. The book is well edited by our friend, Dr. Charles A. Oliver, and it is handsomely printed. F. P. N.

INJURIES TO THE EYE IN THEIR MEDICO-LEGAL ASPECT. By S. BAUDRY, M.D., Professor in the Faculty of Medicine, University of Lille, France, etc. Translated from the original by ALFRED JAMES OSTHEIMER, JR., of Philadelphia, Pa. Revised and edited by CHARLES A. OLIVER, A.M., M.D., Attending Surgeon to the Wills Eye Hospital, etc. With an adaptation of the Medico-Legal Chapter to the Courts of the United States of America, by CHARLES SINKLER, Esq., Member of the Philadelphia Bar. Extra Cloth, $1.00, net. Philadelphia: THE F. A. DAVIS CO., Publishers.

IN this quiz compend (Saunders' No. XI) diseases of the skin are classified as follows: Disorders of glands; inflammations; hemorrhages; hypertrophics; atrophies; new growths; neuroses; parasitic affections. The matter is arranged in such a manner that its study will give the student a systematic knowledge of the subject. Special attention is given to treatment, the standard works having been consulted and what seemed best to the author taken from them. The fourth edition has undergone numerous small, but important, changes, in order that it may reflect our present knowledge of cutaneous diseases. The illustrations are, as a rule, good. F. W. F.

ESSENTIALS OF DISEASES OF THE SKIN, including the Syphilo-dermata, arranged in the form of questions and answers. Prepared especially for Students of Medicine. By HENRY W. STELWAGON, M.D. Fourth edition, thoroughly revised. Illustrated. Price $1.00, net. Philadelphia: W. B. SAUNDERS.

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THE author thinks with most physicians, that the reading of medical books by nurses is of doubtful value. On the other hand, the ordinary handbook is too superficial to be of any value, and in order to give to the nurse in one volume the medical knowledge which he thinks advisable for her to possess, the author has prepared the present work. Part I considers briefly anatomy and physiology. Part II takes up the management and nursing of the sick, digestion and dietetics, administration and action of drugs, cases of emergency, duties of the nurse in operations, bandaging, etc. Part III takes up various diseases, giving to a limited extent the cause, symptoms, pathology, but dealing especially with the nurse's duty in the management of the case. Part IV consists of a chapter on child-birth and the newly born child, and also one on gynecological cases. An appendix has been added describing appliances with which the nurse should be familiar, such as cold compresses, wet packs, etc. On the whole, we think that the efforts of the author have been successful, and that the work will meet with a hearty reception from the profession. E. W. F.

A HANDBOOK FOR NURSES. By J. K. WATSON, M. D., Edin., Late House Surgeon Essex and Colchester Hospital; Assistant House-Surgeon Sheffield Royal Infirmary and Sheffield Royal Hospital. American edition, under supervision of A. A. STEVENS, A.M., M. D., Professor of Pathology in the Women's College of Pennsylvania, etc. Illustrated. W. B. SAUNDERS. Price $1.50.

THIS forms No. II of Saunders' question compends. Six editions of this useful book have been exhausted, and in order to supply the increasing demand for a work small enough not to be cumbersome, yet large enough to give the student an insight into the elementary principles of surgery, this, the seventh edition, has been enlarged and revised, and in its present form presents the prevailing opinions on this branch of medical science. It seems, however, that much of the pathological part could have been omitted with advantage, as the student today is thoroughly instructed in morbid anatomy and histology before he begins the study of surgery. E.W.F.

ESSENTIALS OF SURGERY, Together with a Full Description of the Handkerchief and Roller Bandage. Arranged in the form of questions and answers. Prepared especially for Students of Medicine. By EDWARD MARTIN, M.D. Seventh edition, revised and enlarged, with an Appendix. Illustrated. Philadelphia: W. B. SAUNDERS. Price $1.00, net.

THE reviewer has been teaching the anatomy of the brain for several years as part of his course of lectures on Psycho-Physics. He has found that students appreciate clear, concise statements of anatomical facts, and illustrations appeal to them as ready means of grasping the relationship of parts and of a more thorough understanding of the architecture of the brain. The brain is dissected in the presence of the class, and where possible is followed by text-book elaboration, My

THE ANATOMY OF THE BRAIN. A Text-book for Medical Students. By RICHARD A. WHITEHEAD, M.D., Professor of Anatomy in the University of North Carolina. Illustrated with Forty-one Engravings. Extra Vellum Cloth, $1.00, net. Philadelphia: THE F. A. DAVIS CO., Publishers.

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students have felt the need of a handy volume to which they can readily refer, and which is concise in its statements. This book before us, which we have carefully reviewed, seems to supply this want, and we congratulate the author in his successful arrangement of the text and his judicious selection of illustrations. It is a book which physicians, too, can use with profit, when in this day of rapid progress in the development of the anatomy of the brain, they wish to brush up on things new in this line. Students will, however, find it a desirable working text-book, and it should meet with favor from both medical students and students in psychology in the universities. F. P. N.

THE July *Scribner's Magazine* is more than usually replete with articles of merit and profit, the following are only a few of the many interesting articles: The Slave Trade in America, by John R. Spear; The College Club Theatricals, by Charles Warren; Trees, by Frank French and beautifully illustrated; The Relief of Ladysmith, by Richard Harding Davis; Harvard College Fifty-eight Years Ago, by George F. Hoar; The Vain Shadow, by Duncan Campbell Scott; The River People, by Dexter Marshall.

THE July *Cosmopolitan* is as usual a library in itself, containing articles of interest for every class of readers. First View of the Exposition of 1900, by F. A. Kidder; Henley Week, by Mrs. Burton Harrison; The Mystery (poem), by Charles Edward Thomas; Is Russia to Control All of Asia? by Alexander Hume Ford; Modern College Education, by David Starr Jordan; The Story of Annabel Lee, by Frances Willing Wharton; Women in Turkey, Their Rights and Wrongs, by Lucy M. J. Garnett; A Clerical Comedy, by W. A. Gill, and many others of equal merit compose this midsummer number.

THE CENTURY CO. announces the discovery of a new romantic novelist in a New Yorker, Miss Bertha Runkle, whose maiden effort is to be *The Century's* leading piece of fiction for the next eight months, beginning in August number. It is described as a dramatic romance of love and adventure, and is entitled "The Helmet of Navarre." The scene is Paris during the siege by Henry of Navarre, and the action occupies but four days of the week preceding the Sunday when Henry entered the city to give his adhesion to the Catholic Church and accept its ecclesiastical rites—the occasion of his saying that Paris was worth a mass. The story is full of vigorous action, and the plot is said to be one of fascinating interest. Among the characters of the story are the king himself, the Duke of Mayenne, who commanded the city during the investment, and a hero and heroine of much attractiveness. This story is, perhaps, another outcropping of the current tendency to romantic fiction, but it is said that it has not been influenced by any of the recent American successes in this field.

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Original Department.

PAPERS for the Original department should be in hand one month in advance, and contributed to THE MEDICAL FORTNIGHTLY exclusively. A liberal number of extra copies will be furnished authors, and reprints may be obtained at reasonable rates, if request accompanies the manuscript. Engravings from photographs furnished free.

Contributions, and books for review, should be sent to the Editors, 312 Century Building, St. Louis.

☞ Signature of contributor, for reproduction, should be sent with every article, on a separate slip; use heavy ink, and allow autograph to dry without applying blotter.

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Illustrations of Vasectomy, or Obliteration of the Seminal Ducts Relative to Hypertrophy of the Prostate and Bladder Atony.

BY REGINALD HARRISON, F. R. C. S.,

LONDON, ENG.,

Surgeon to St. Peter's Hospital.

WHEN sufficient grounds were furnished for asserting that the nutrition and growth of the prostate, whether normal or hypertrophied, might be importantly influenced by obliteration of the seminal ducts, or by removal of the testes,* the first stage may be said to have been reached in a series of observations which will probably prove of increasing value in practical surgery. Though experience is not yet sufficiently ripe upon this point there are good reasons for believing that a vasectomised or castrated male is not liable to undergo hypertrophy of the prostrate in the ordinary acceptation of the term. As this point, as now seems probable, becomes more fully determined, not only will a fact of great pathological importance be established, but it will be possible to indicate how by means of a simple and safe operation one of the most serious troubles of advanced life may be averted or controlled. I have reserved for this paper some illustrations of vasectomy, or more strictly speaking, obliteration of the seminal ducts by torsion, as described in my last article, in its application to the treatment of prostatic hypertrophy.

Statistical information gathered from the mere collection of a number of cases having but little in common, is not of much assistance in a matter of this kind, where the conditions and circumstances are so varied. In

* Surgery of the Hypertrophied Prostrate. Dr. J. W. White. Trans-American Surg. Ass'n. 1893.

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taking my results of vasectomy as practised to the extent, and during the period mentioned previously, I find they permit of being grouped as follows: First, where the effects are known to have been good, sufficient and enduring. Second, where they have been good, but restricted to certain conditions. Third, where they are alleged to have been inadequate or negative. The question of mortality arising from the operation is not one requiring consideration, as in the series of over 100 cases referred to previously, I stated I have never seen harm follow.

The first group may be said to include cases of prostatic obstruction pure and simple without any other structural complication. Here the bladder is in no sense secondarily implicated structurally, and is capable on the removal of the obstacle in front of it, of both holding and expelling its contents. It is in this class of cases that shrinkage of the enlarged prostate, however induced, speedily leads to the restoration of the function of micturition in the fullest sense of the term. This group is best illustrated by cases where for some special or pressing reason the obliteration of the vasa was brought about at an earlier period in the history of prostatic obstruction than is usual. Hence this group is less numerous than the succeeding one where catheter life or the systematic use of this instrument had been resorted to previously. The following cases are selected:

A man, aged 68, seen in 1896, with the ordinary symptoms of enlarged prostate, namely, frequent micturition, more especially at night, some degree of residual urine, and occasionally incontinence, the diagnosis being confirmed by rectal examination. He had been advised to use a catheter, but could not do so conveniently, as he had lost an arm. Double vasectomy with an interval of ten days between each section. I saw him nearly three years afterwards the prostate was reduced in size. He was quite well and had no occasion for the catheter.

About the same time I divided the vasa of a man aged 65, whose work as a journeyman builder was greatly interfered with by frequency of micturition due to enlarged prostate. He also had been advised to use a catheter. He was treated in the same way as the preceding with a similar result, and was examined eighteen months afterwards.

In 1897 I saw a man, aged 65, who in the course of his occupation travelled much by railway and otherwise. He had an enlarged prostate and much frequency, for which he was advised to use a catheter. As this meant giving up his livelihood vasectomy was practised with good results, and eighteen months afterwards he reported himself as quite well without requiring the catheter.

Early in 1898 I saw a patient in consultation, where it had been necessary to tie in a catheter for retention of urine caused by a large prostate. This was so intolerable to him that I suggested vasectomy, which was done. I have heard on several occasions that he still remains in good health and able to urinate normally. Six months after the operation I found the prostate much reduced in size.

A man, aged 67, upon whom I operated for stone by litholapaxy in 1893. There was also some enlargement of the prostate. He remained well till 1897, when symptoms of considerable enlargement developed, and though

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he had no recurrence of stone, he gradually became entirely dependent upon the catheter, and was liable, on slight provocation, to attacks of cystitis and epididymitis. The frequent use of the catheter greatly interfered with his capacity and desire for an active outdoor life, and he was compelled to give up hunting and other exercises. In 1898 I divided both his vasa in the usual way, with the result that his prostate symptoms gradually disappeared, and he resumed his hunting during the whole of last winter, as he had previously done. He was able to give up his catheter, using it once in the twenty-four hours for washing out. He had accustomed himself to the latter as a precautionary method against stone, and though the process, he admitted, was hardly necessary he did not like to give it up.

This appears to be the first published series of cases of prostatic hypertrophy treated by operation where the object of preserving the normal function of micturition as opposed to an artificial one as illustrated by what is known as catheter life, has been successfully demonstrated.

"Before leaving this group I would observe that in every case it was explained that the section or division of the vasa might interfere with sexual possibilities. It may, I think, be claimed that in all these instances, and in others that might be mentioned, whatever influence, if any, was exercised on the sexual act the natural function of micturition was preserved to the person operated on, and the necessity for the permanent use of a catheter averted. When any question has arisen under these circumstances, so far as my experience goes relative to whether the urinary or sexual function should receive first and parmount consideration, it has invariably been decided by the patient in favor of the former.

Passing to the second group of cases, where I have described the effects following as being good, but restricted to certains conditions. These include instances where structural changes in the bladder have supervened upon prostatic obstruction, and where catheter life, or the necessity for it, has been more or less developed. This group provides by far the greater proportion of cases to which this class of operations has been recently applied.

In a previous paper I showed that there were certain structural effects which followed in the wake of prostatic and other forms of obstruction to the escape of urine by the natural passage, which were irrecoverable from. These have reference to the bladder as a reservoir capable of self-expulsion. Hence in the consideration of the class of operations of which vasectomy is a type, cause and effect must not be confused. The prostate may be rendered in these ways incapable of obstruction any longer, but this by no means implies that the bladder can be made to expel. And yet the realization of the former by these means has in this way proved in many instances, which I will proceed to illustrate, an inestimable boon.

In November, 1895, I operated on a man aged 70, with a very large prostate and increasing difficulty in catheterism which sometimes required hot baths and opiates before it could be effected. He had shaky hands which increased the difficulty. I advised a double vasectomy. Twelve months after this he wrote me: "I certainly am very much better than I was before the operation, and so long as I am quiet and able to carry out my regular treatment I get on very comfortably."

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A man, aged 75, very large prostate and increasing difficulty in passing his instrument. Double vasectomy in 1898. He soon found that he could pass his catheter quite easily, and again wintered abroad last year, with much comfort. He had been previously obliged to forego this change by reason of catheter difficulties.

A member of our own profession, over 60, whom I saw in consultation, and advised vasectomy for enlarged prostate with frequent attacks of epididymitis, which confined him to bed, has entirely got rid of the latter painful complication by the obliteration of his ducts, and is now again in the active practice of his profession. The next case I shall refer to is the application of vasectomy as an adjunct to other surgical purposes.

It was that of a man, aged 70, whom I operated upon for stone in the bladder in 1893. The prostate was so large that I had unusual difficulty in performing the ordinary operation of litholapaxy, and after removing a considerable portion of the stone in this way I had to abandon it without effecting a complete removal of the calculus. The patient, however, did well and was much relieved. In the meantime I divided both vasa, and after six weeks interval repeated the crushing operation. The considerable shrinkage that was thus effected in the size of the prostate rendered this proceeding easy and complete.

For the relief of hemorrhage arising out of difficult catheterism in connection with prostatic obstruction vasectomy has been adopted with good effect in rendering the process easy and avoiding bleeding. This is only to be expected as the result of a process which is generally admitted as reducing the blood supply to the parts involved.

Painful catheterism arising from spasm and tension as the instrument enters the prostatic urethra may be usually relieved in this way by the general shrinkage and relaxation of the gland that follows section of the vasa—I have had several illustrations of this.

For reasons such as are here illustrated, and for others that might be added to the group, the obliteration of the vasa has proved of much service, though the voluntary and natural powers of the bladder, may either have not been, or but partially restored. Easy and safe catheterism has in this way been substituted for that which previously was painful, if not also dangerous.

I will conclude with a notice of the third group of results of vasectomy, which seem to me to include the most interesting and suggestive of the series that I have here brought under notice. I refer to those instances where they are alleged, or seem to have been inadequate or negative.

For the purposes of this paper I have made numerous inquiries by letter in addition to other sources of information, from patients who have undergone vasectomy since 1893, when I commenced to practise it with some frequency. Amongst these is a man now aged 81, upon whom I performed double vasectomy for prostatic enlargement of some years standing early in 1897. On writing to me he informed me that he did not think he had derived much benefit from this operation. The history of this case, however, will hardly bear out this statement. The patient has been

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under my observation for four years previously to this. He had considerable irritation and spasm, for which the catheter was being constantly employed. There was also so much cystitis that I then drained his bladder by the perineal route with temporary benefit. In 1896 his condition, however, in these respects became worse and the bladder very foul in spite of catheterism, and washing out. In addition to this the specific gravity of the urine began to drop so as to vary from 1004-7. As this condition so often precedes renal disease and uremia in these cases of prostatic obstruction I divided his vasa early in 1897. From that time forward the urine, amongst other changes, gradually returned to a normal density, and the general condition of the patient improved, though he continued, and still is, largely dependent on the catheter. He uses it much more easily and, as I am told by his friends, is in good general health. He doubtless failed to appreciate the renal improvement, which I have similarly observed in other instances as being probably connected with mechanical reasons. The patient doubtless measured the success of the vasectomy, as others do relatively as to whether he could or could not dispense with his instrument, without sufficient regard to less striking contingencies of catheter life. This patient should properly occupy a place in the second group, but I thought it better to take him at his word, as one that vasectomy had not benefited. The substitution of a good contractile bladder for one that obstruction had worn out would probably suffice to complete the cure. I will take one more instance, which may properly be considered in this group from the patient's point of view, though, as with the preceding, I decline to agree with him. It has its lesson to teach, which may be the more conveniently learned in this place.

A man, aged 74, operated on for stone by litholapaxy by me in 1894. Complicated with a large prostate for which he had to use a catheter. The operation was not an easy one, by reason of the former. He had two recurrences in the course of the two following years, which I mainly attributed to the obstructing prostate, so I divided both vasa in 1896, with an interval of some weeks between each. He has had no recurrence of stone, can pass his catheter quite easily, keeps free from cystitis, and goes to Scotland to fish (a sport which he had previously had to abandon), and is now not entirely dependent on the catheter. For a man of 80 I should say he was in excellent health, and yet because he is not able to dispense with the instrument entirely he is not disposed to admit that vasectomy did him much good. I am not inclined to agree with him, and consequently I should also put him in the second group. My experience in litholapaxy, as illustrated in a recent series of 100 cases, leads me to believe that vasectomy has proved an important aid in preventing the recurrence of stone when complicated with enlarged prostate. It probably effects this by providing a free and a more independent exit from the bladder, as well as by diminishing the large amount of tenacious mucus which the enlarging prostate both provokes and helps to supply, and which lessens materially as the gland shrinks.

I can hardly recall an instance of vasectomy or torsion of the vas for hypertrophy of the prostate where good has not followed, though it may

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not at once be appreciated by the patient. It is not always relative as to whether or not the patient can or cannot dispense with the catheter.

Nor is credit always given in this group of cases to the fact that though chronic prostate obstruction had already caused permanent structural damage to the bladder as the organ for expelling urine, and not merely holding it, the further progress of an obstructive disease was arrested by obliteration of the vasa, and life was thus indefinitely preserved and rendered tolerable. Though in the case of the eye a cataract operation is successful, this does not necessarily imply that spectacles can entirely be dispensed with.

In one instance benefit was slow in coming where the obstruction had previously been of a very chronic character, and the bladder had become much weakened, and fasciculated. It was found six months after a portion of one of the vasa had been excised and the ends ligatured in a loop, that the divided ends had reunited, and the continuity and use of the duct had been re-established. I have the specimen which I subsequently excised, and then torsed the freshly divided ends separately. Benefit followed upon this. The specimen was carefully examined for me by Mr. Pardoe. I could hardly think, unless I had seen it, that this was possible, at all events I have not met with another instance.

In conclusion, surgery may be said to be entering upon a new phase of research for therapeutical purposes. Thyroidectomy and oophorectomy have produced results so remarkable, and changes in the organism so profound, that complete removal, except for the express purpose of saving life, is in the first instance condemned as totally inadmissible, and in the second is deprecated by a large and constantly growing number of surgeons.

The effect of castration on youthful males for the purposes of the harem has been known for centuries. The effect upon adult and aged men has only recently been investigated. In children the results are not dangerous to life; in the aged apart from the shock of such a severe surgical mutilation they are, in some cases at all events, dangerous to reason if not to life.

The explanation offered by Physiology is the well-known theory of "Internal Secretion." This theory proved so strikingly correct in the case of the thyroid, may, although the testis is not a ductless gland, be equally applicable to the latter organ. In any case it is incontestable that most serious results follow total removal of both testes, whereas I can confidently assert from my seven years' experience of the operation that double vasectomy, performed in the manner I have described in a previous paper, causes no untoward results whatever.

TORONTO UNIVERSITY is advertising for two professors for the medical department. On account of the death of Dr. J. Elliott Graham, the professorship of medicine and clinical medicine is vacant, and the professorship of pathology also by the resignation of Dr. John Caven.

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PUS.

BY DAVID W. REID, M. D.,

JACKSONVILLE, ILL.

Read before the Jacksonville Medical Club.

I OFFER these thoughts, principally with reference to the work of the general practitioner, which includes not only minor surgery, but the diagnosis of the graver forms of pus manifestations, such as empyema, septicæmia, appendicitis and pelvic abscess, the proper treatment of which may demand the work of the surgeon.

Many of the more serious forms of disease demanding surgical interference are so insidious in the earlier stages, that they are with difficulty distinguished from ordinary constitutional ailments, even by skillful diagnosticians.

All pus is the result of infection by pus microbes. I think we may consider this statement as the foundation-stone of modern surgery. The field of human knowledge is so vast that no one can compass the whole. Each must accept the results of the investigations of others and make use of them as a foundation for his own work. The surgeon need not be a bacteriologiot, any more than the physician need be a pharmacist or a botanist. The man who enthusiastically accepts the findings of expert bacteriologists and makes their work the basis of his own, may be a higher authority in the practical application of the science than the one who laboriously verifies for himself the works of Pasteur and Koch.

In considering the etiology of pus, then, we may without presumption, refer by name to the various organisms that produce it. Of over a hundred named species of bacteria, less than half a dozen may be taken into account in nine-tenths of the every day work of the physician, using the term in its widest sense; and of these, only two—the staphylococcus pyogenes, and the streptococcus pyogenes—may be considered pus-producing. Of these two, the staphylococcus pyogenes aurens is accredited with producing eighty per cent of all infections resulting in the formation of pus. Surely, of all the ills that issued from Pandora's box, these two represent the quintessence of malevolence.

The presence of pus in the human body is accompanied by certain symptoms, which however variable, are perhaps as constant as the symptoms of most constitutional diseases the physician meets. But as the tendency of pus manifestations is not toward recovery, but to increase in severity till the pus escapes or is withdrawn, it is all important that the physician be familiar with pus symptoms, as we may call them, so as to differentiate them from self-limiting ills belonging to the realm of medicine.

Ordinarily, pus, even in small quantities, is recognized by the presence of inflammation, with its classical symptoms of rubor, tumor, dolor, but the severity of these symptoms varies greatly with the location and many other factors. If the pus deposit is superficial, the redness, pain and swell-

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ing are easily noted and pus predicated. It needs no surgeon with special training to relieve a superficial, pointing abscess. It takes some experience, however, to enable the practitioner to recognize the presence of deep-seated pus, and to evacuate it, or call for surgical aid before it destroys tissues that can never be replaced.

Several factors go to determine the amount of constitutional disturbance in a given case of infection. One factor is the amount of surface involved. This, of course is measured by the size of the pus cavity, the lining of which may be looked upon as an absorbing surface through which the poisonous pus products enter the circulation. And this brings us to another factor: that of tension. If the pus cavity has free drainage, all tension is removed and absorption is slow. Again, given a pus cavity in a soft tissue near the surface, and the tension, as also the pain and nervous perturbation, is slight as compared with a like abscess beneath the periosteum, bound down by unyielding membranes, beneath which the pus burrows along the line of least resistance. Some of us have experienced, and most of us have observed, the throbbing pain caused by a drop of pent-up pus at the root of a tooth, and the almost instant relief experienced as the pus escapes from the dense alveolar structures into the soft parts of the jaw, and in popular language, "it stops aching and begins to swell." It is this, in part, that causes the difference between a bone felon and a boil. A single drop of pus in the dense, semi-cartilaginous nasal or aural structures may cause more annoyance for a whole week, while trying to reach the surface, than an ounce of pus caused by the breaking down of soft glandular tissues. We frequently see the temperature, in a case of pelvic abscess, fall from 103 or 104 to normal, in a few hours, following the withdrawal of a quantity of pus, relieving the tension and for the time stopping absorption. In such cases the temperature will rise the next day, from reabsorption even with perfect drainage.

A group of still more important factors that go to determine the amount of constitutional disturbance in a given infection, may be arbitrarily included under the head of virulence. This is due, in part, to the kind of infecting microbe, but there are many other elements that enter in. In fact we do not know, as yet, and we may never know, just what are all the elements that go to determine the severity of a given infection.

We have learned that of the two pyogenic cocci, the one that is most prevalent; the one that causes by far the greater number of all cases of pus accumulation, is the staphylococcus; the author of pustules and furuncles and suppurating wounds; of all pus conditions where the tendency is toward the formation of a well defined abscess, pointing toward the surface; while its fellow, the malevolent streptococcus, produces an inflammation characterixed by greater constitutional symptoms, attacks and destroys deep and bony structures; tends more to necrosis than to the production of distinct abscess, and is the father of bone felon, osteo-myelitis, phlegmonous erysipelas and the more deadly forms of puerpural infection.

These are the more pronounced characteristics of the two pyococci, as they are sometimes called, but they are often found—some investigators

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say nearly always found—in conjunction, causing what is known as "mixed infection."

The kind of microbe, then, is one element in what we may term virulence, but it is only one. Another element is doubtless the number of invading germs. A few score bacteria, on the point of a knife or probe might fail partly or entirely of infection, where a few hundred would overcome the resistance of the system and produce abscess, or even overwhelming septicemia and death before the localization of pus. Where rabbits and guinea pigs are inoculated it is with large number of the germs, hence the large proportion of positive results.

Another important element in this connection is the inherent vitality of the inoculating germs. A scratch or puncture from an instrument fresh from an abscess or a necrotic bone is far more virulent than when the instrument has lain for several days with the germs losing their vitality hourly. Again, the freshness of a wound has much to do with its probable infection. A cut or scratch that does not become infected the first day is less likely to become so, from the fact that the parts have had warning and are up in arms. Each granulation, rich in blood supply, is a tiny fortress raised against the threatening invader.

These are some of the elements of what we call virulence. Still the question remains unanswered: Why does one infection, of staphylococcus, say, cause a mere pimple, another a large boil, and a third a life threatening abscess? Why does a streptococcus infection, in one case, strike to the bone, localize in one phalanx of the finger, producing panaris, while another traverses the whole arm and saturates the system, producing death, or spreads rapidly over the surface of the body in the form of erysipelas?

Every infection is a culture growth of micro-organisms. The bacteriologist, when studying pathogenic bacteria, does not simply place them under the microscope and identify them by their form and size. Bacteria are too much alike in these respects to be thus differentiated. To study a given specimen he first makes a nutrient medium, containing certain elements of the human body, and in this the suspected germs are planted, from the point of a needle or a knife. It is then kept as near the temperature of the human body as possible while incubation proceeds. Of course all bacteria do not flourish at this temperature; but it is evident that all pathogenic varieties must do so, as it is this very fact that makes them pathogenic. Having planted his germs, he looks for results in almost every case where living germs are implanted under favorable conditions. If several cultures are attempted and no results or colonies he obtained, he pronounces the suspected specimen sterile.

Now, we may look upon every pin prick, every scratch, every abrasion of the knuckles, every cut with a pocket knife or razor, ever splinter that penetrates the skin, as a probable implantation, under more or less favorable conditions for growth, of pyogenic germs that may be expected to produce colonies followed by abscess. But do they? Sometimes. Not

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often. In fact, it is only under rare and peculiarly favorable circumstances that we have any results following a light puncture, scratch or abrasion. That is, the probability of serious infection in any given case of slight injury as compared with the tremendous possibilities, is very small indeed. Taking it for granted that, as bacteriologists tell us, the germs are omnipresent; in earth, in air, in water; in the lungs, the breath, the saliva; everywhere, in fact, unless recently destroyed, if it were not for some inherent resisting power in the body, every slight wound, every thorn and splinter entering the body, every scratch of a cat, or bite of a dog, every case of bleeding piles, every first labor—indeed we may, perhaps, say every labor, every extracted tooth, would, with considerable probability be followed by disastrous consequences.

Now we may ask, what is it that makes the human body, with its favorable conditions as to heat, moisture and nutrition, so incomparably inferior, as a culture medium, to the gelatine, or agar-agar or blood serum of the culture tubes? In answering this question, let us take the ordinary boil as the best example of a simple, microbic infection. The microbes come from without, not from within the body, and following the hair downward, begin to multiply. The inflamed base of a furuncle is the battle-field between the forces of life and death. The moment the infecting germs enter the tissues the blood attacks them, and attempts to destroy them. How the battle will end, nobody can tell. In the vast majority of cases the issue is decided before we are aware of the contest. In a few comparatively rare cases the invading forces get the upperhand, and begin to carry on a war, offensive and defensive. They huddle together like sheep attacked by wolves. They do not spread as in the phlegmenous inflammation of the streptococcus, but the whole tendency is toward a localized, accurately defined, spherical pus cavity, enlarging slowly but surely on all sides, destroying the adjacent structures, causing pain by pressure on surrounding nerves, pointing in the direction of least resistance, which in this case is the surface of the skin overlying. Whether it will become a large boil or merely a pimple, depends on the vitality of the pus germs as compared with the resisting power of the blood supply in the neighborhood. At first the system may be taken by surprise and the germs obtain a foothold, and even make considerable advancement in the process of destruction. Were there no reserve force, now, to be called into action, the system would succumb to the first invasion of the enemy. But immediately the character of the blood in the neighborhood changes. A line of defense is built up. Leucocytes by the thousand hurl themselves upon the invaders from all sides, and are themselves destroyed, forming the debris that, under the microscope, we term pus cells. Part of the poison of carnage is carried into the circulation, raising the temperature to fever heat, if the abscess is a large one or involves important structures, but at the same time, under a system of proscription known as leucocytosis, raising up an army of recruits and hurrying them forward to the scene of conflict. Eventually the abscess is walled in by a fortification of granulations, until, soon or late, the pus, by continued pressure causes this wall

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to break down in some direction and the pus escapes. In the meantime, if no escape is made, important structures may be destroyed by pressure and breaking down of tissues, or life itself may yield to the absorption of pus products. In the furuncle, however, there are but two endings possible. Either the knife will make an opening for the pus to escape, or the skin must yield to pressure and decay, hastened, perhaps, by the soothing and macerating influence of a poultice. "I put a poultice on and rotted it" was the perfectly scientific statement the writer heard recently from a colored patient.

" My blood is out of order. I wish you would give me something for my blood. I've had no end of boils, and——"

"Nonsense," says the surgeon as he reaches for his knife. "There's nothing wrong with your blood. A boil is a local infection, and except for contamination by the staphylococcus pyogenes aureus or albus, there would be an entire abscence of furunculosis."

"That's what I know," says the patient, "and I want something for my blood."

Where boil follows boil; where paronychias will not heal; where every slight wound suppurates, is it not because there is some defect in the defense—in the blood? Is the unhappy victim of furunculosis to be taken bodily out of the hands of the physician and turned over to the tender mercies of the surgeon, for cutting, squeezing and curetting, or is there some truth in his absurd notion that his blood is out of order? Local infections of all kinds come more readily when the patient is below par in general health. Job was probably run down by a long period of debauchery. We read that the Devil had had him in tow some time before his boils broke out. If, now, he could have had the counsel of three good physicians, instead of as many tiresome theologians, he would have had his system toned up; his broken potsherd, with which "he scraped himself, withal," thus spreading sympathy and infection, would have been taken from him, and he would have been taught a few lessons in sanitary science instead of theology.

"Why is a boil always on the worst place?" We laugh at the question, but it has its answer. The "worst places" are the exposed places. The back of the neck, where the collar rubs the microbes into the skin; the wrist where the cuffs irritate, and make the entrance of germs more easy; the top of the shoe, the razor-swept chin are all favorite "worst places." The nates, where the owner is sure to find it when he sits down, was prepared for the boil by sitting down, not prepared for sitting down by the arrival of the boil.

Returning now to the more important and deep-seated collections of pus: These are essentially surgical in their treatment, but on account of their obscurity, they generally come into the hand of the physician before reaching the surgeon. In the meantime important structures may be sacrificed. The head of the femur; the shaft of the tabia; the pleura, or the lung itself may be destroyed for want of diagnostic ability on the part

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of the physician into whose hands the case may have fallen. Hence, the importance of being able to recognize the case as one even possibly calling for surgical intervention before irreparable damage is done.

The writer recalls thinking when a child, that the blacksmith's hands became so callous by usage that he could handle red-hot iron with impunity. He also recalls thinking, when not a child, that the wonderful tactile sense of the surgeon enabled him to palpate through overlying muscles and abdominal viscera and detect "fluctuation" of which we so often read. The truth is, fluctuation is a symptom rarely detected. The diagnosis of deep-seated pus is formed, not from one symptom, but from many. Immobility, rigidity, pain, œdema, redness, tumefaction, dullness on percussion, all have their diagnostic value to the surgeon. But the most important of all; the one most generally, but not universally present; the one characteristic symptom, alike within reach of the physician and surgeon, is the temperature chart of absorbed pus.

The physician who, by exclusion of systemic fevers, finds that he has a remittent temperature curve that he is unable to account for, especially if associated with local pain and a rapid pulse, should strongly suspect pus and call for surgical assistance. So much may be reasonably expected of every physician, and may be essential to the life of his patient.

The temperature chart in a case of obscure pus absorption—and in far the greater number of cases there is more or less obscurity—is strikingly like that of a case of typhoid fever or malarial fever. Tons of quinine have been dosed out to patients suffering from gradual pus absorption. Bushels of salicylic acid have been fed to supposed rheumatics, the victims of osteo-myelitis, morbus coxæ and various other manifestations of hidden infection. Until referred by the family physician, these cases never, or rarely come under the eye of the consulting surgeon.

Every physician carries in his mind, a typical temperature chart of typhoid fever by which he measures every case of obscure fever. In contradistinction to this stands the abruptly broken line of his malarial intermittent fever chart. To these he refers, mentally, unconsciously perhaps, almost every day of his life. Every case of fever that does not carry with it some diagnostic characteristic, as the eruption of scarlatina, or the cough and pain of pneumonia, is compared momentarily with these two charts the first time he sees it. It is not malarial, he says, for it has no intermission. It is not typhoid, for it came on too abruptly. These two charts can not be ignored. But how many physicians hold in mind, for every day use, what is sometimes called the streptococcus curve? Yet he who ignores this curve does so at the peril of his patient.

In conclusion, I present partial charts illustrating the temperature record of pus absorption. In each of these cases, a large quantity of pus was evacuated immediately after entering the hospital, and the best possible drainage established. The occasional extreme exacerbations so often noticed in such cases may be due either to a temporary impairment of drainage, or to extension of the suppurative process to new areas.

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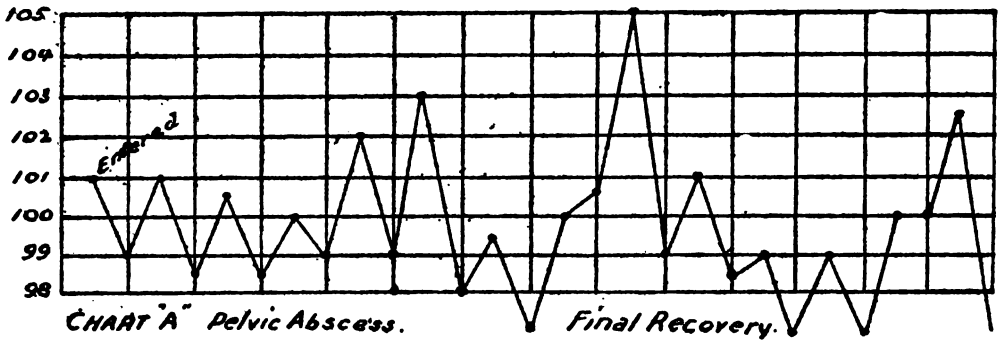

CHART "A" Pelvic Abscess. Final Recovery.

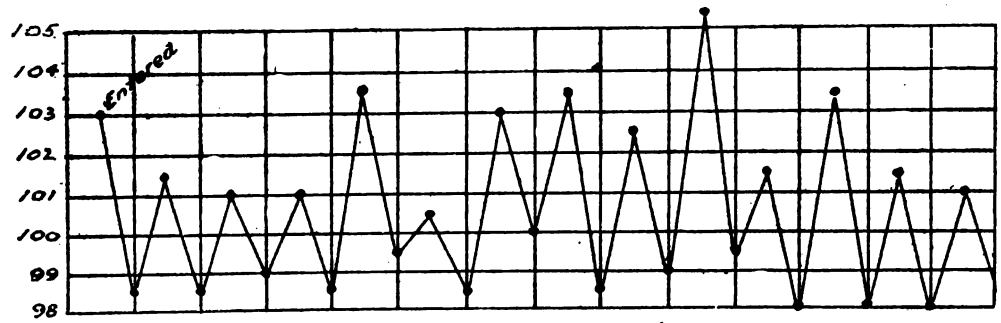

CHART "B" Puerpural Septicaemia. Final Recovery.

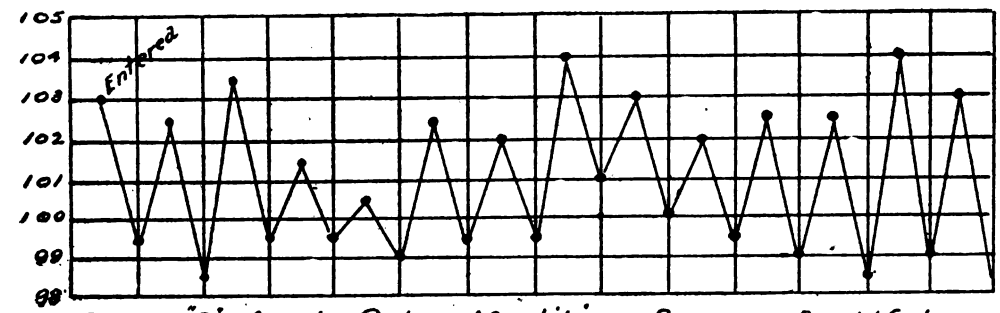

CHART "C" Acute Osteo-Myelitis. Recovery Doubtful.

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Favorite Prescriptions

Epilepsy.—The following formulas are taken from the *Journal of the American Medical Association*:

℞ Lithii bromidi.....
Potassii bromidi.....
Sodii bromidi.....
Calcii bromidi.....aa ʒj
Syrupi aurantii corticis..... ʒj
Aquæ, q. s. ad..... ʒiij

M. Sig.: Teaspoonful in water after meals to prevent recurrence of convulsive seizures.

EPILEPSY WITH WEAK HEART.

℞ Potassii bromidi..... ʒv
Syrupi acaciæ..... ʒiv
Infusi adonis vernalis, q. s. ad..... ʒxvj

M. Sig.: Tablespoonful in water after meals in epilepsy with weak heart.

EPILEPSY WITH VASOMOTOR RELAXATION.

℞ Potassii bromidi..... ʒiv
Tinct. belladonnæ fol..... ʒij
Syrupi..... ʒiv
Aquæ, q. s. ad..... ʒiij

M. Sig.: Teaspoonful in water after meals in epileptic subjects with vasomotor relaxation.

Malarial Cachexia.—Dr. Guice finds the following combination effective:

℞ Quininæ sulphat..... ʒi
Tinct. ferri chlorid..... ʒv
Liq. acidi arseniosi..... ʒiss
Potass. chlorat..... ʒi
Syr. zingib., q. s. ad..... ʒiv

M. Sig.: Teaspoonful in water thrice daily after meals.—*Therapeutic Gazette.*

Elixir of Terpin Hydrate for Bronchitis.—The following formula is recommended by Crinon:

℞ Terpini hydrat..... gr. lxxx
Glycerini.....
Spir.....aa ʒ iiss
Mellis despumat..... ʒ ij
Tinct. vanillæ..... m lxxv

M. Sig.—Two to four tablespoonfuls a day.—*Med. News.*

Exophthalmic Goitre.—

℞ Syr. hydrodic acid..... ʒ iij
Syr. hypophosphites (McArthur's)..... ʒ ix

M. Sig.: Dessertspoonful before meals and at bed-time. Should be administered in wine or milk.

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Reports on Progress.

COMPRISING THE REGULAR CONTRIBUTORS OF THE FORTNIGHTLY DEPARTMENT STAFF

GENERAL SURGERY.—C. E. Black, M. D., Jacksonville, Ill.

DISEASES OF THE CHEST—W. W. Bulette, M. D., Pueblo, Colo.

INTESTINAL AND RECTAL SURGERY—S. G. Gant, M. D., New York City.

DISEASES OF THE MIND—Frank C. Hoyt, M. D.

RHINOLOGY AND LARYNGOLOGY—John A. James James, M. D.

GENITO-URINARY SURGERY AND SYPHILOLOGY — Bransford Lewis, M. D.

OPHTHALMOLOGY—J. Ellis Jennings, M. D.

ORTHOPEDIC SURGERY — Phil. Hoffman, M. D.

GYNECOLOGY—Josephine Milligan, M. D., Jacksonville, Ill.

OBSTETRICS—R. B. Murphy, M. D.

MEDICINE — Frank Parsons Norbury, M. D.

CLIMATOLOGY—Hubert Work, M. D., Pueblo, Colo.

PATHOLOGY AND BACTERIOLOGY—Rutherford Gradwohl, M. D.

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LONDON CORRESPONDENT — R. T. Hewlettt, M. D., M. R. C. P., Chief Bacteriological Laboratory, Jenner Institute of Preventive Medicine, London.

TUBERCULOSIS.

BY FRANK PARSONS NORBURY, M. D.

Formerly Resident Physician Pennsylvania Institution for Feeble-Minded Children; Formerly Assistant Physician Illinois Central Hospital for the Insane; Physician to Oak Lawn Sanitorium and Passavant Memorial Hospital; Neurologist to Our Savior's Hospital; Lecturer Psycho-Physics, Illinois College.

AND EGBERT W. FELL, B. S..

JACKSONVILLE, ILL.

Typical Tuberculosis without Koch's Bacilli.—Cowemont and Tixier (Proc. Soc. des Sc. Méd.) relate a case of streptobacillary tuberculosis occurring in man and inoculable in animals. The trouble began as a hemorrhage arthritis, the lesions being typically tubercular, but Koch's bacillus being absent. Inoculation to rabbits and guinea pigs produced a rapidly developing tuberculosis of the lymphatics, local suppuration and hemorrhagic lesions of the serous membranes. From a tubercle in the liver of one of the guinea pigs a streptobacillus was isolated which was distinct from Koch's bacillus.—From abstract in *Med. Age*, April 10, 1900.

Tissue Building and Nerve Toning in Tuberculosis.—(Maybury, *K. C. Med. Lancet-Clinic*, April, 1900).—Cod-liver oil acts not only as a general tissue-builder, but also a nerve builder, it should be given in an emulsion or other agreeable form, the author preferring Waterbury's metabolized oil. This may be combined with creosote or guaiacol. Where a hypnotic is needed in neurasthenic patients chloretone may be given with excellent results, as it does not depress the heart, derange digestion or establish a drug habit.

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The Dietetic Treatment of Wasting Diseases.— Murray says that the physiological function most often perverted in phthisis, scrofula, etc., is the digestion of fat there being a lack of pancreatic and biliary secretion. Cod-liver oil is useful, but greater advantage will be gained from the predigested preparations. The author recommends the pancreatized emulsion known as hydroleine.

X-Ray in Diagnosis of Pulmonary Diseases.—Stubbert (*Phil. Med. Jour.*, January 6, 1900).—Slight haziness indicates beginning of tuberculous infiltration. Circumscribed spots of bright reflex surrounded by dark shadowings, or located in the midst of a dark area indicate cavities. Intense darkness indicates pleuritic thickening over consolidated tissue. Pleural effusions are shown in dark shadow, the upper border of which may be agitated. Pericordial effusion would throw a like shadow. Shadows in the first and third stages of pneumonia resemble those of tuberculous infiltration, those in the second stage, tuberculous consolidation. In emphysema and asthma the reflex is clear and movement of the diaphragm on the affected side restricted. A great deal depends upon the intensity and steadiness of light and the amount of muscular and adipose tissue intervening.—From abstract in *Month. Cyclo. of Pract. Med.*, February, 1900.

A Report on the Contagiousness of Pulmonary Consumption.—(Flinterman, *Physician and Surgeon*, March, 1900.)—The disease is infectious and communicable, but not contagious. The chief means of prevention are as follows: Expectorating on the ground should be prohibited. Streets should be sprinkled before sweeping to prevent dust becoming distributed through the air. All public houses and conveyances should be inspected and proper cleaning enforced, as should also factories, school-rooms, etc. All houses should be under strict sanitary inspection and should be thoroughly disinfected after deaths from tuberculosis. Articles of food sold and persons handling them should be under rigid inspection. Tuberculous patients should not be admitted to general hospitals, but special institutions provided in locations where the climate, etc., is favorable for their treatment. Dispensaries are a source of danger, and cleaning and disinfection should be carefully attended to. The establishment of a public bacteriological laboratory will facilitate the diagnosis of incipient cases. Of the greatest importance is the recognition of the fact that dried sputum is the chief means of infection. Therefore, patients should be taught to dispose of the expectorations in such a manner that they may not become sources of danger to others. "It is very essential and too great stress cannot be put upon this point, that everything should be avoided which might tend to wound the feelings of victims of tuberculosis, as by showing an intention to avoid their company, or to exclude them from social intercourse with their friends and neighbors." Compulsory notification and isolation are cruel and inexpedient, because they are necessary. The only hope of reducing the mortality of consumption is in instructing the public regarding the dangers of dried sputum, improving the general average of health and recognizing the disease in its first stages.

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The Treatment of Pulmonary Tuberculosis.—Solly (*Inter. Med. Mag.*, March, 1900) says that the time of application is more often the cause of failure than the remedy itself. In 50 per cent of cases treatment is not begun early enough. Hygiene is the central fact in treatment. Different classes of cases vary in their requirements, those with a hereditary taint usually demanding the most radical change of life. Under intelligent supervision and accompanied by hygienic treatment, change of climate is our most powerful therapeutic agent. In advising change, not only the climate should be considered, but the individual, his tendencies and circumstances as well. Cold is better than heat; dryness than dampness; sunshine than cloudiness; high ground than low. Wind in moderation and variability in temperature with dryness are beneficial. Those cases in which the process is predominantly tubercular do best in high, sunny climates where the air is dry and cool. When catarrhal symptoms predominate a high, dry, sunny climate is best, but warmth is preferable to cold. In those cases in which the tubercular invasion was preceded by an inflammatory process, and is marked by periods of temporary improvement, a medium elevation is best, with plenty of sunshine, moderate warmth and moderate dryness.

Earlier Diagnosis and Treatment of Pulmonary Tuberculosis.—(Duffield, *Phys. and Surg.*, March, 1900.)—Among the symptoms of incipient tuberculosis the author mentions, the facial expression with widely opened and searching eyes, quivering nostrils, whiteness of skin. Inspection of the chest shows a lack of development, flattened anterior surface, depression above and below clavicle, and sloping shoulders. Palpation may reveal an increased vocal fremitus. Diminished expansion with increase of number of respirations is important. Prolongation of the expiratory vesicular murmur, or marked clearness and loudness in the apices indicate weakness of lung tissue. Bronchial breathing in the apices, subclavicular space, or below the angle of the scapula is almost positive proof of tuberculosis. Friction sounds at the apex may be caused by pleural infection. Bronchophony over other portions than the trachea and bronchi is regarded as positive. Moist rales are heard in advanced cases. Pulmonary hemorrhage is often an early symptom. The cough is often persistent and hacking in the morning, followed by large discharge of mucus. Increase of temperature and pulse rate with sharp accentuation of secondary sound over pulmonary artery occurs in the latter part of the day. The author thinks that the original tuberculin of Koch, if properly used, is safe. He prefers the watery extract of the tubercle bacilli, as prepared by von Ruck, and finds that early cases respond uniformly to one-tenth milligram. This extract differs from Koch's tuberculin B in the fat being extracted by ether and the watery solution of the macerated bacilli being passed through a porcelain filter. With treatment with this extract as follows, the author has obtained good results. Doses of one-hundredth milligram are increased daily till one-twentieth of a milligram is reached; this is repeated for a week or two, then increased to one-tenth milligram, increasing gradually till one-half milligram is given at a dose. This should be accompanied by general treatment.

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Report of 1371 Cases Treated in the Asheville Climate.—(Burroughs, *Charlotte Med. Jour.*, March, 1900.)—No far advanced cases are included. Heredity was shown in 902 cases. As complications laryngitis occurred 481 times; diarrhea 78; pleurisy, dry, 121; pleurisy with effusion 27; empyema 19; rectal fistula 36; bone necrosis 24; bronchial catarrh 223; suppurative otitis 43; deafness 251. Pleurisy was treated by strapping the sides after withdrawal of fluid; empyema by drainage and antiseptic washes and oils; diarrhea by ichthyol; fistula by the usual method; otitis by peroxide of hydrogen and iodoform. In all cases the diagnosis was confirmed by bacteriological examination. Result of treatment was arrested or cured 947; benefited 321; not benefited 72; deaths 31. Patients are placed in sunny rooms which have been disinfected with formalin gas. They are required to spend several hours of each day out of doors, and are taught to breathe deeply and to dispose of the sputum in the proper manner. No fixed rules can be laid down for feeding. Nitrogenous foods, beef, mutton, milk and eggs should be given short of tiring the stomach. As a routine practice each patient is rubbed with lard at bedtime, as much as three ounces being absorbed. Creosote, pepto-mangan and cod-liver oil are given internally. Intra-pulmonary medication with creosote, menthol, oil eucalyptus, oil pine needles and oil cedar in glymol dissolves the sputum and places the lung tissue in the best sanitary condition.

Tuberculin, Anti-Tuberculin and Anti-Tubercle Serums.—(McFarland, *Inter. Med Mag.*, March, 1900.)—Koch's original tuberculin was made by a process of concentration and filtration of a culture of the bacillus on glycerine bouillon. From this the refined tuberculin is obtained by precipitation with alcohol, and drying. Tuberculin gives all the reactions for albumin, and consists of $C_{47.61}$, $H_{7.26}$, $N_{14.55}$, $S_{1.16}$. Solutions in gelatine are very stable. When injected into tuberculous animals or persons a reaction results. In a man there is a rise of temperature, acceleration of the pulse, dyspnœa, increased expectoration and considerable prostration. This is caused by the local action on the tubercular focus; the capillaries are dilated, and the tissues in a condition of inflammatory edema predisposing to softening and maceration of the coagulation-necrotic center of the tubercles. There is absolutely no effect on the bacillus, and the chances of cicatrization is diminished. For these reasons tuberculin is useless as a remedial agent and dangerous for diagnosis. The anti-phthisin and tuberculocidin of Klebs are probably modifications of tuberculin, and are of no benefit. Hirschfelder's oxy-tuberculin is prepared by treating cultures with hydrogen peroxide, which is supposed to destroy the toxic, but not the immunizing powers. Anti-tuberculin, a serum prepared by Viquerat and the author, is valueless. Koch's tuberculin R is an aqueous extract of the crushed bodies of living virulent tubercle bacilli. The beginning dose is one-five-hundredths milligram rapidly increased to twenty milligrams. From his experiments Koch thought that it possessed immunizing powers, but later results have not sustained this. Maraglinav, De Schweinitz, Paterson, Babes, Proca, Behring and others have produced serums, but results up to the present are not satisfactory.

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A Case of Tubercular Peritonitis Complicated by Insanity.—Owens (*Canad. Pract. and Rev.*, March, 1900) reports a case of insanity occurring in a woman during an acute exacerbation of tubercular peritonitis which took the form of mania, the patient being suspicious and having delusions of a religious nature. Recovery followed breaking up of the peritoneal adhesions and draining of the cavities.

Diagnosis and Treatment of Tuberculosis of Bones and Joints.—Willard (*Inter. Med. Mag.*, March, 1900) lays great stress on early diagnosis, and says that nine out of every ten cases are rendered incurable by delay. It should be remembered that rheumatism in a single joint in a child never exists without fever, swelling, etc. Muscular rigidity is a reliable and early sign. Tenderness rather than pain is present at first, when heat and swelling are absent. The amount of traumatism may be slight. Muscular fixation of the femur, slight limp, tenderness and pain along the inner aspect of thigh following a slight injury are enough to make the diagnosis of tuberculosis. Acute osteomyelitis or epiphysitis may be distinguished by the sudden onset, extreme pain and rapidity of the process. The question of heredity has no weight in making the diagnosis. The rational treatment is as follows: 1. Fortify the sustaining powers so that the bacilli may either be expelled or encapsulated. 2. Rest and mechanical support to prevent inflammatory action. 3. Removal of the diseased focus or its products. Injections of sterile iodoform oil or formalin have been used, but the operation of choice is total eradication of the focus.

Tubercular Ulcerations in the Stomach and Intestines: the Use of Tuberculin.—(Reed, *Inter. Med. Mag.*, March, 1900.)—Tubercular ulcerations of the stomach and duodenum are uncommon, the HCl inhibiting the growth of the bacillus. In the remainder of intestine ulcers are more frequently found. Primary infection is rare in adults, more common in young children. Secondary infection is usually caused by swallowed sputum, and is practically a hopeless condition. The primary form, if properly treated, can usually be cured. Persistent derangement of digestion accompanied by wasting and a slight rise of temperature after midday, points to tuberculosis. Stubborn diarrhea with fetid stools and sensitiveness over circumscribed spots in the bowels may be caused by ulceration which may be tubercular. The author favors the use of tuberculin for diagnosis, and thinks it is useful in treatment if small doses are properly given. In gastrointestinal tuberculosis the usual modern methods of treatment are applicable. A high, dry, sunny climate with the best of hygienic surroundings, warm clothing, moderate exercise and out-of-door life is the most satisfactory treatment. Nutritious food should be given to the extent of the patient's ability to digest and assimilate. Large doses of medicine irritate the diseased digestive tract, some cases doing better without drugs. Fowler's solution or creosote in one or two drop doses may be useful, as also the hypophosphites and blander iron preparations. If the gastric secretion is below normal, creosote, carbolic acid and cod liver oil may be given by the mouth by the addition of pepsin and hydrochloric acid. Colon douches of carbolic acid may be of benefit. Surgery may be resorted to in proper cases.

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Effects of Different Preparations of Tuberculin.—Denison (*Inter. Med. Mag.*, March, 1900) thinks that tuberculin, if rightly used, will produce a relative immunity in infected individuals. Dr. von Ruck's watery extract he regards as the best form. Failure in treatment is due to difficulty of selecting the proper cases and nicety of technic required to administer the drug. It is not so much a cure as an aid to other remedies, hygienic, climatic, etc.

Tuberculosis of the Skin.—(Schamburg, *Inter. Med. Mag.*, March, 1900.)—Tubercular ulcerations occurring in the neighborhood of the orifices of the body are shallow, painless, with irregular infiltrated edges and scanty secretion. They spread slowly, and there is no tendency to healing. Anatomical tubercles begin as a vesico-pustule with an inflammatory areola, later developing into a horny or warty nodule. Scrophulo-derma begins in and around caseating and suppurating lymph glands and extends to the skin, which becomes infiltrated and ulcerated. Nodules may develop and break down; these are surrounded by a bluish areola and are very indolent. Associated symptoms, as keratitis, blephoritis, etc., are usually present. Lupus vulgaris is more common in foreign countries. It begins in early life, usually on the nose or cheeks. Brownish red papules or nodules at first level with the skin later become elevated, break down and ulcerate, resulting in unsightly scars. In skin diseases the tubercle bacilli are present in very limited numbers, and generalized tuberculosis does not usually result. Syphilis is more rapid in its course, develops later in life, the nodules are firm, and ulcers have sharp edges, and the discharge is profuse. Treatment consists of extirpation of the diseased tissues, tonics and a nutritious diet.

Tuberculosis of the Nervous System.—(McCarthy, *Inter. Med. Mag.*, March, 1900.)—The trouble may result from the action of the bacillus itself as in tubercular tumors, lepto- and psycho-mengitis, encephalitis and myelitis, or from poisons produced, as low grade inflammatory changes, polyneuritis, insanity, etc. Tuberculous polyneuritis is the only tubercular affection of the peripheral nerves. Tuberculous meningitis is always secondary to disease of the lung, peribronchial gland, or tumors or encephalitis of a tubercular nature. It frequently follows operation on a tuberculous joint. A case is given in which the fourth day following the operation headache, restlessness and photophopia developed. Temperature 100°–103°. Rigidity of neck muscles developed and twitching of the limbs was followed by rigidity. In the second week there was complete unconsciousness, and the cranial nerves became involved. The body was covered with red spots. Reflexes exaggerated. Patient became comatose, pulse rapid, respiration of the Cheyne-Stokes type, death resulting at the end of the fourth week. There were no convulsions. Meninges were congested, there were small tubercles along the course of vessels and slight internal hydrocephalus. In other cases there is a thick seropurulent exudate. The process may be confined to one portion of the meninges, the symptoms depending on the seat of the trouble. Tubercular myelitis is either an extention of a meningitis, or is caused by pressure of a tuberculous exu-

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date around the cord. Encephalitis may result from extention of the inflammatory process to the brain, or interference with the blood supply by an exudate. Solitary or multiple tuberculous tumors of the brain constitute fifty per cent of intercranial tumors. They have the same structure as tubercles in other parts of the body; they grow slowly, and symptoms, if present, depend on the portion of the brain involved. Solitary tubercles occur most frequently in the lumbar enlargement; multiple tubercles may also occur. Simple deformity resulting from Pott's disease rarely causes cord symptoms. When the process extends to the cord the symptoms depend on the location of the trouble. If in the dorsal region there is progressive, spastic paralysis of legs, increased reflexes and ankle clonus, anesthesia, bed sores, and rectal and bladder disturbances. If in the lumbar region, the paralysis is flaccid, and reflexes are lost. High cervical caries may give rise to bulbar symptoms—paralysis of tongue, cervical neuralgia, etc. Low cervical caries may cause atrophic wasting of arms while higher up it may cause spastic paralysis of all four extremities. Epidural tuberculosis may occur. Insanity occurring in tuberculosis may be merely the manifestation of an unstable mental condition, or may be caused by the toxins generated by the bacillus. Phthisical insanity, according to Clousten, follows a distinct clinical type—suspicious, irritability, unsociability, with causeless, unaccountable exacerbations and a want of interest in anything being the chief symptoms.

The Laboratory Diagnosis of Tuberculosis of the Urinary System.—(Babcock, *Inter. Med. Mag.*, March, 1900.)—Search for bacilli may fail on account of the small number present, failure to secure adhesion to cover glass, presence of sediment, or confounding the smegma bacillus. The Harris instrument is used if the kidneys are to be examined. The urine is centripifugalized and sediment dissolved with a solution of borax 4 parts, boric acid 4, aqua 100; acetic acid, etc., according to its nature. The remaining sediment is removed to a slide, mixed with a drop of egg albumin and stained with carbol-fuchsin in the same manner as sputum, care being taken to leave in hydrochloric acid solution long enough to decolorize the smegma bacilli. If this method fails inoculation of a guinea pig should be tried.

The Treatment of Consumption.—(Stewart, *Inter. Med. Mag.*, March, 1900.)—Patients should be out of doors as much as possible when the weather is dry. Surroundings should be hygienic. Daily baths are essential; clothing should be not too heavy, but sufficient for comfort. Systematic, moderate, regular exercise in the open air should not be neglected. The value of cod-liver oil has been overestimated; it very often produces indigestion, nausea, and diarrhea. Rich milk and cream, and as much albuminous food as will be digested should be given. Treatment is symptomatic, there being no specific. Creosote and carbolic acid if given in doses sufficient to produce antisepsis cause digestive trouble. Small doses are useful in relieving vomiting or gastric symptoms. The basis of the author's treatment is guaiacol carbonate, strychnia, capsicum, ammonium chloride and quinine combined and modified to suit the case.

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MEDICAL MISCELLANY

A WOMAN in New Jersey has obtained a verdict of $8000 against the Pennsylvania Railroad Co. for a dislocated kidney caused by a jar in coupling a car upon which she was a passenger. Her husband is to receive $2000 additional for the loss of her companionship.

IMPACTED CERUMEN.—Hardened wax in the external ear can often be removed readily by injections of warm water and soap, soda or ammonia. Many cases resist this, and require the softening effects of glycerin or sweet-oil for a day or two before syringing. Do not bother with these long processes, but use a half strength solution of hydrogen dioxid in the ear for about five or ten minutes. This will disintegrate the hardest plugs, and they can be removed with very little syringing. I have yet to see the case in which this process has caused irritation or inflammation. Do not use too much force with the syringe. Wipe the ear perfectly dry with absorbent cotton and apply petrolatum. Wear a small plug of cotton in the ear for one day after removal.—*Phila. Med. Jour.*

Dr. A. L. BENEDICT, of Buffalo, who has been appointed by the Pan-American Exposition as Superintendent of Ethnology and Archaeology, desires the assistance of the physicians, and writes as follows: "Many members of the medical profession are interested in the study of American Ethnology and Archaeology, and not a few have valuable collections of Indian relics and skeletons from Indians graves. Those not directly interested in this study are so circumstanced as to be aware of the hobbies of their neighbors and could doubtless furnish the address of collectors. I should be greatly obliged for information and for the loan of collections for the use of this department of the exposition. Exhibits which represent study in some special line of American ethnology and archaeology will be particularly suitable."

SOMETHING NEW IN SURGERY.—"I see," said the old man Pimpernel the other evening, "that they've mended another broken neck for a feller. He had a fall somewheres out in the country, an' when they got him to th' hospital th' doctors found that his upper spinal colume was cracked clean across. Feller couldn't hold his head up, an' his voice was clean gone."

"How did they patch him up?" inquired Josh Bowman.

"You'll be s'prised when I tell you," replied the old man. "It was so dead easy. Fust, they crowded over th' left phalanx till it lapped the right ventrickle, an' then they stuck th' two ends together with anty-toxum glue. That's fer blood pizonin', you know. Then they got the broken ends of the medulla together an' fastened 'em in place with strips of adhesin' plaster. After that they nailed narrow rods of zinc up and down his backbone and clinched them together with rivits. When this was all fixed the surgeon sent out an' got an old-fashion bootjack, an' they tied it on his chest so that the openin' at the top would just catch under his chin, an' hold it until the glue hardens. An' as soon as it does harden the young feller 'll be just as sound as ever, with a few rivits thrown in."

"Thunder!" cried Josh Bowman, "Ain't it wonderful!"

"You jest bet it is," said the old man.—*Cleveland Plain Dealer.*

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TREATMENT OF INGROWN TOENAIL.—Dr. Puerckhauer recommends a novel, simple, and at the same time, competent treatment for ingrown toenail. A 40 per cent solution of potassia is applied warm to the portion of the nail to be removed. After a few seconds the uppermost layer of the nail will be so soft that it can be scraped off with a piece of sharp-edged glass; the next layer is then moistened with the same solution and scraped off. This must be repeated until the remaining portion is as a thin piece of paper, when it is seized with a pincette and lifted from the underlying soft parts and severed from the other half. The operation does not require more than half an hour's time, is painless and bloodless, while the patient is delivered from his suffering without being disabled even for an hour.—*Med. Summary.*

A QUICK DIAGNOSIS.—One of the anecdotes related by Dr. Weir Mitchell in the July instalment of his *Century* serial, "Dr. North and His Friends," might well be a personal experience of the author's.

I once went to Harrisburg and had to return during the night. The train was crowded. At last, in the stifling, dimly-lighted smoking-car, I found a man asleep across two seats. I awakened him, and saying I was sorry to disturb him, sat down.

After a little he said, "Do you know Dr. Owen North?"

Rather astonished I said, "yes."

"What kind of a man is he?"

"Oh, a very good fellow."

"He is like all them high-up doctors, I guess. He gets big fees. I want to know."

"No," said I. "That is always exaggerated. Why do you ask?"

"Well, I've had a lot of doctors, and I ain't no better, and now I have'nt much money left."

Upon this my friend confided to me all his physical woes in detail. We parted before daybreak. It was too dark in the car for either of us to see plainly the face of the other.

About ten the next day the man entered my consulting-room. As I should not have known him, except for a rather peculiar voice, I, too, remained unidentified. I could not resist so comic an opportunity. I said, looking at him, "Sit down. You have a pain in your back."

"That's queer. I have."

"And you are blind in the left eye, and your digestion is very bad," and so I went on.

At last he said: "I never saw a doctor like you. It scares a man, 'most. Can you cure me?"

I said, "Yes," and wrote out my directions. It was really a simple case.

When he produced a well-worn wallet I declined to take a fee, and said, "I owe you for the seat, and the good sleep I disturbed last night."

"Thunder! I see. You were the man. But law! why did you give it away? I'd have sent you the whole township."

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Wanted.—An up-to-date young or middle-aged doctor to take my place. Address DR. G. KATES TALLEY, Belgrade, Mo.

Bicyclic Obstetrical Calendar.—A novel and handy ready-reference calendar for physicians, handsomely printed in two colors on card convenient for vest pocket. Sent free on request by the publishers, Norwich Pharmacal Co., Norwich, N. Y. This calendar presents many advantages over those commonly used, it is ingeniously conceived and handsomely gotten up. Its size is small, and it is consequently not too large for convenient carrying. Its accuracy is perfect.

The Mosquito and Malaria.—The subject of the transmission of malarial disease by the mosquito is one of the most important before the profession at the present time. Considerable attention was devoted to this subject at the recent meeting of the American Medical Association at Atlantic City, at which time a valuable resume of the latest researches on the question was distributed to the members in attendance by McKesson & Robbins, to whom belongs the credit of its preparation. The pamphlet is one of more than passing scientific value, and we are glad to learn that the edition was not exhausted at Atlantic City. Those of our readers who have not yet received a copy will do well to drop a card to McKesson & Robbins; a request will bring it.

Cholera Infantum.—Physicians coincide in their views regarding the treatment of the summer diarrhea of infants and children to a degree that enables it to be thus briefly summarized: Diet, emptying the alimentary tract, antisepsis. For the antiseptic treatment, listerine alone, or listerine, aquæ cinnamon and glycerine, or, listerine, bismuth and misturæ cretæ, will meet many requirements of the practitioner during the summer months. The following well tested formulæ are submitted:

℞ Listerine..... 3j-ij
Simple syrup..... 3vij-vi
M. Sig. Teaspoonful every two or three hours.

℞ Listerine.....
Glycerine (c. p.).....
Syr. simpl.....
Aquæ cinnamon.....aa ℥i
M. Sig. Teaspoonful every one, two or three hours.

℞ Bismuth, sub. nit..... 3ss
Tr. opii..... gtt xx
Syr. ipecac.....
Syr. rhei, arom.....aa 3ij
Listerine..... ℥ss
Mist. cretæ..... ℥j
M. Sig. Teaspoonful as often as necessary, but not more frequently than every three or four hours. This for children about ten or twelve months old.

Thirty-two pages devoted to the management of summer complaints of infants and children, may be had upon application to the manufacturers of listerine—Lambert Pharmacal Company, St. Louis.

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The Medical Fortnightly.

Issued Tenth and Twenty-fifth of Every Month by the Fortnightly Press Co.

UNDER THE EDITORIAL DIRECTION OF

FRANK PARSONS NORBURY, M. D. AND THOS. A. HOPKINS, M. D.

Secretary: CHARLES WOOD FASSETT, M. D.

A COSMOPOLITAN BIWEEKLY FOR THE GENERAL PRACTITIONER

Editorial Offices in St. Louis, Chicago, Cincinnati, Jacksonville, St. Joseph, Kansas City, and Pueblo, where specimen copies may be obtained and subscriptions will be taken.

Address all business communications to the Fortnightly Press Company.

Address all contributions and books for review to the Editors, Suite 312, Century Building, Saint Louis.

Paris: U. S. Press Building, Espanade des Invalides, Paris Exposition.

Volume XVIII **AUGUST TENTH** **Number 3**

Editorial Department.

The Pace Which Kills.

THERE is perhaps no disease which so strikingly illustrates the scriptural text, "The way of the transgressor is hard," as does paretic dementia (paresis). From the standpoint of health, the transgressions are self inflicted, and the victim has no one but himself to blame for the fate which awaits him. Doubly hard, seemingly, is this fate when the victim is a man of keen perceptions, of ability, of artistic temperament, and one who has been a power in the business or professional world. However, the victims of this disease, while bright, intelligent and successful, lack symmetry of character and sterling qualities of manhood. By reasons of their talents they rise to eminence, but because of the absence of resolution, firm decision and moral purpose, their success intoxicates them, and they drift into that current of fast life that leads inevitably to the swirls of death.

It is a pace which kills, a good fellowship that does not pay, and one that surely will end in dissolution. The recent passing of Charles H. Hoyt, the playwright, from the public eye into a private retreat for the insane, a victim of paresis, calls attention once more to this dread disease, which swallows the victims of the temptations of that rapid pace which kills.

One of the leading theatrical critics of this country speaking of Hoyt's sorrows arising from the death of his wife as a factor in this disease, says rightly, "No doubt the loss of his beautiful young wife was a stunning blow, and certainly that mournful event won for him the most profound sympathy of all who were advised of the deplorable facts. But grief, even in an acute form, does not lead to paresis, which finds its origin in physical rather than mental strain."

It is the life which Hoyt led for which he is now paying, and the lesson in this case cannot be ignored.

The writer has time and time again heard the same story, seen the victims in the first stages of the disease, and has watched them until death came as a merciful interception to the sad victim of that pace which kills.

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The plain facts as to the cause of this disease should not be hidden, syphilis causes fully 90 per cent of all cases, while of the remaining 10 per cent, the habits formed in the swirls of the tenderloin district are responsible. We cannot afford to overlook causation in commenting on this disease, for it conveys the moral to be found in its contemplation The busy, prosperous man, who thinks he can burn the candle at both ends, engage in irregularities of conduct, and still go unscorched is mistaken. Irregularities exact a penalty which may be both painful and fatal. The bohemian living, as he thinks, in clover, dabbling in what he calls pleasures, is really living in a fool's paradise, and while he may never realize it, his friends or relatives may. It is a bid for paresis, and thousands of bids are being accepted more than ever before. It is the pace which kills. F. P. N.

Hydrocephalus.

OF THE various essentially chronic affections of childhood, none are more distressing to behold than hydrocephalus. It is not as yet amenable to treatment and must be looked upon as a real degeneracy. It is an affection usually congenital in origin, but may follow diseases of nutrition, as in ricketts, syphilis, etc., or follows as a dropsy, when from some cause Galen's veins or the superior vena cava are compressed. The organic change in the brain structure is marked and conspicuous, viz., the dilatation of the ventricles, the compression of convolutions, the functional obliteration of certain areas, and even complete disappearance of certain convolutions, lobes, and even hemispheres. Again, the bones of the cranial vault are deformed, the fontanelles and sutures often widened, and a hideous balloon shaped cranium, gives striking evidence of this grade of affection.

It seems to the writer, who has studied the pathological evidences of these conditions, as well as noted the clinical, mental and physical changes that the proposed surgical treatment of this disease is unwarranted and unjustifiable. Dr. E. P. Davis, of Philadelphia, in a recent number of the *Archives of Pediatrics* (July, 1900) reports a case operated by craniotomy with the expected fatal result. He adds, that "the literature of the subject does not give reports which would lead one to hope for permanent recovery after the operation." No! we should say not, and why add to the burden which surgery has to bear, such unwarranted interference. It only reflects upon surgery, whereas it should reflect upon the lack of knowledge of pathology. No doubt the surgical technique was all that could be desired, but the surgical pathology was decidedly defective. And what is more surprising, that such men as Davis, Ratch and others should advocate surgical interference in the light of the modern pathology of the disease.

The writer was the first to oppose craniotomy as a relief for microcephalus, advocated by Lannelongue, and did so upon the basis of pathology, which the later experience of surgeons has confirmed. If Dr. Davis will study the cases in the Pennsylvania Institution for Feeble-Minded, also the pathological records of that institution, he will find that recovery by any means, is not to be expected. F. P. N.

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Obscure Mental Phenomena.

IT IS strange how the old ideas of supernatural intervention in curing disease persist. From the very dawn of history there has been a disposition to "see everywhere miracles and nowhere law" in disease. Today we see it in the mental epidemics of Dowieism, christian science, magnetic healing, etc., etc., now sweeping over the land. And mingled with it is that ancient disposition to throw about the leaders of these epidemics a hero worship that is blind in its adoration and persistent beyond measure. Throughout human history some person or persons in almost every generation have had a following ascribing to them miraculous powers in the cure of disease. We have but to read Andrew D. White on "A History of the Warfare of Science with Theology in Christendom," Vol. II, to note that Dowie, Mary Baker Eddy, Weltmer, Still and others are not prototypes, but base imitations of healers extending back into history, yes, as far back as history goes.

As White says, "So it was that, throughout antiquity, during the early history of the church, throughout the Middle Ages, and indeed down to a comparatively recent period, testimony to miraculous interpretations which would now be laughed at by a school-boy was accepted by the leaders of thought." This tendency has not yet vanished, for we see men, presumably educated men, still believe in such absurd doctrines. However, the leaders of thought are not endorsing such heresy, and just recently, before the Chautauqua Assembly, at Chautauqua, N. Y., Prof. George A. Coe, of the Northwestern University, spoke on "Obscure Mental Phenomena," and in the course of his lecture attacked christian science. Prof. Coe said in part:

> "That religion has some relation to health is clear from almost every page in the history of religions. Even within the two great branches of historical Christianity, the Catholic and the Protestant, there lives and even flourishes a belief in the efficacy of relics or of the intercession of saints. Every one of these groups, too—Christian Scientists, faith healers and adorers of relics—is ready to have its belief judged by the fruits of it in the actual restoration of the sick. These things are not done in a corner; on every hand we are invited to come and see. In fact, the evidences of most remarkable cases under all these systems of belief is so abundant that I shall not hesitate to assume without argument that we are here dealing with one or more curative agencies.
>
> "At present let us consider the relation of mental healing to hypnotism. When Christian Scientists and faith healers deny that their cures are wrought by hypnotism, they do not deny that such cures are wrought by suggestion. Suggestion is indeed an omnipresent agency, the most subtile in its ways of working, and productive of effects in many different ways. As a word of warning we must remember that while the organism is easily thrown out of order by suggestion it is not so easily restored to its normal condition. The positive danger of performing any amateur experiment upon the vital organs is obvious enough.
>
> "Again it must never be forgotten that an indispensable part of every safe method in treating disease is competent diagnosis. No one is competent in general to practice any healing art who is not prepared to understand the nature of the complaints for which he prescribes. Who except a scientifically trained physician should be trusted to decide what kind of treatment each difficulty calls for?

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"It comes about again and again that the patient of Christian Science or of faith healing practice or allied methods of treatment imagines himself to be cured when nothing of the sort has happened. I have seen a faith healer work up great enthusiasm in cripples and in persons partly blind by insistently suggesting that they were better. Glasses, ankle braces and crutches abandoned—this proves nothing definite. We need to know how often these helps have to be resumed. Suggestion does not replace an arm shot off in battle, it does not set broken bones or reduce dislocations; it does not dislodge cancerous growth or replace it with healthy tissue; it has no way of reaching the brain once in the grip of progressive senile dementia; it knows not how to kill or expel from the system the bacilli that cause so large a portion of disease; nor can it claim to be an antidote of any active poison.

"There has been a great deal of hunting for cases of organic disease cured by faith, and what has seemed to be game has started repeatedly, but the amount actually bagged is—one does not like to make a categorical denial of what depends upon the competence of others' observation, but it is safe to say that defenders of faith cure have collected their test cases by methods that lack scientific precision and that supposed proofs have been so uniformly exploded whenever trained physicians have examined them, that the medical profession of today is entirely justified in ignoring the new announcement of miraculous cures made from time to time."—Times-Herald.

If one needs further confirmation of the absurdities of the claims of these fadists he needs but to attend one of their "Demonstration meetings," usually held on Wednesday evenings. Here, in a nutshell, one can find the pabulum upon which these creatures feed. It is a real psychological side-show, and as pitiful as it is amusing. Surely, the law of degeneracy is benign, or else these spectacles would prove more disastrous to civilization.

F. P. N.

Alexander J. C. Skene, M. D.

IN THE death of Dr. Alexander J. C. Skene, of Brooklyn, New York, on July 6, 1900, America loses one of its great men in medicine. Born in Scotland in 1837, but coming to this country at the age of 19, he grew up with a strong love for America and American institutions, but yet felt a warmth of affection for Bonnie Scotland. He began his medical course at the University of Michigan, but finished at Long Island College Hospital in the class of 1863. He at once entered the medical corps of the U. S. Army as Acting Assistant Surgeon, and served with distinction at David's Island and Port Royal, S. C. While in the service he planned the hospital corps now in use in the army and National Guard. After the war, Dr. Skene returned to Brooklyn, where soon after he became connected with the teaching faculty of the Long Island College Hospital, and how well he has served in this capacity we all know. He was in truth a teacher, and his ability in all of the successive chairs occupied by him, has been of the highest order. First in the department of clinical medicine, where his diagnostic abilities were especially acute; then in the special department of diseases of children, and later in gynecology, which chair he occupied twenty-four years. It was in this department that the writer as a student first knew him and learned to revere him, both as a man and as a scholar.

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We are not given to hero-worship, but we do admire man in all of his true manhood, and such an admiration we had for Prof. Skene. Later, as a young physician, we remember his kind admonitions and friendly instruction, and we shall cherish these letters because of his kindly feeling for us, as well as that for all mankind.

This is the second of our collaborators to be called by death this year, and we cherish the memories because the friendships date back to our student days, a time when friends were friends indeed, and time can only add new wreaths to the cherished memories of these departed ones.

The *New York Tribune* has these kind words to say regarding the death of Dr. Skene:

A LOSS TO HUMANITY.

In the death of Dr. A. J. C. Skene, of Brooklyn, the world sustains a grievous loss. The community loses an ideal citizen, a man who, with rare unselfishness and singleness of purpose, labored to lessen pain and suffering and to increase health and life—of whom, indeed, it might without irreverence be said that he lived and labored that others might have life and might have it more abundantly. Beginning his career with the creation of the now invaluable army ambulance service, he has closed it with the foundation of what was designed to be one of the noblest and most beneficent of charities. The profession which he adorned suffers a loss which is to be estimated by members of that profession more justly than by laymen. The world knows, however, of his rare judgment in diagnosis, his marvelous ability in surgical operation, and his authority as a teacher and writer, recognized wherever the English language and, indeed, most other civilized languages are used.

Most keen of all, perhaps, is the sense of personal loss which comes to innumerable former patients and to friends. His cheery humor, his spontaneous sympathy, his almost more than human tenderness and his unfailing and inspiring hopefulness must remain precious memories to all who have been ministered to by him. To more than a few, who have long leaned upon his strength and who have partaken of his generous bounty, it will now seem as if, in the words of Carlyle's sorrow, 'the light of their lives has gone out. For such a loss to humanity there could be no consolation were it not for the assurance that greater still has been the world's gain through the activities and achievements of his pure and exalted life.

The Southwestern Iowa Medical Association will meet at Glenwood, Iowa, Thursday, August 16th, 1900.

The Medical Society of the Missouri Valley will hold its annual meeting at Council Bluffs, Ia., September 20, 1900.

OUR NEW JEWISH HOSPITAL.—Architect Will Levy has lately made a tour of inspection of eastern hospitals for the association which is to erect our new Jewish Hospital. He visited all the larger Atlantic cities, and Cincinnati and Cleveland, and brings back a mass of information which includes the strong points of all the institutions which he visited. It is his purpose to incorporate the best features of these in the plans for our new hospital, and it is safe to say this will be a hospital of which all St. Louis will be justly proud.

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The Reviewer's Table.

Books, Reprints, and Instruments for this department, should be sent to the Editors, St. Louis

A CYCLOPEDIA OF PRACTICAL MEDICINE AND SURGERY. A concise reference book, alphabetically arranged, of Medicine, Surgery, Obstetrics, Materia Medica, Therapeutics, and the various specialities, with particular reference to Diagnosis and Treatment. Compiled under the editorial supervision of GEORGE M GOULD, A.M., M.D., Editor of the *Philadelphia Medical Journal*, etc., and WALTER L. PYLE, A.M., M.D., Assistant Surgeon to Wills Eye Hospital. Seventy-five Contributors. Quarto. Illustrated. Sheep, or half dark green leather, $10.00; Half Russia, thumb index, $12 00. Philadelphia: P. BLAKISTON'S SONS & CO. 1900.

THIS is a valuable reference book, convenient, because of its size ; useful, because of its conciseness. It covers a range of practical information, such as diagnosis, therapeautics, materia medica, operative and laboratory technique, treatment and other essentially clinical information. The subjects are arranged in alphabetical order, and comprise the latest views and authoritative information of today. Seventy-three contributors have assisted the editors in compiling this cyclopedia, thus making it the most thorough and reliable ready reference book yet published. The literary task of condensing all of this information in one volume must have been great, but it has been well done. The book is deserving of popular favor, as it is thorough and contains the information, easily sought, which every physician needs in his daily work. Some slight errors have been noted in the volume, notably the laws pertaining to insanity of several States are not of the latest revision ; this is especially true of Illinois. F. P. N.

LAUTAUD'S GYNECOLOGY—Manuel Complet de Gynecologic Medicale et Chirurgicale par A. LUTAUD. Nouvelle 4me edition entierement refondue, contenant la technique operatoirec omplete. Un fort volume. Seven hundred and thirty pages et 607 figures dans le texte. A. MALOINE, Publisher, Paris. 1900.

THE name "Lutaud" carries with it enough weight to insure this volume a considerable number of American readers, a number which will, unfortunately, be limited by the fact the average American reader does not read French. The volume is destined for the general practitioner rather than the surgeon-specialist in this branch. It occupies a middle ground between compends and the voluminous works which have been recently published, it covers the subject with sufficient detail, and while it gives major operations their due attention, the strong point of the book is the fact that the technique of every-day gynecology is so prominent a feature, this naturally must gain popularity for the work. Especial attention is given to plastic operations, to uterine displacements conditions which should be successfully handled by all practitioners. The chapters on medical gynecology are well worth several readings, the surgical has so completely eclipsed the medical in this branch that it is well to be reminded that operations do not constitute the whole of the subject. Both subject-matter and press-work are of high order, making it a volume which reflects credit on the author and the publisher.

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WE have learned to watch for this valuable publication. This quarterly number (Vol. II for 1900) is up to the high established standard. The summaries of progress found in this volume are Surgery of the Abdomen, including Hernia, by Dr. W. B. Coley; Gynecology, by Dr. John G. Clark; Diseases of the Blood, Diabetic and Metabolic Diseases; Diseases of the Glandular and Lymphatic System, by Dr. Alfred Stengel; and Ophthalmology, by Dr. Edward Jackson. This compilation of the literature has been carefully made, and the commentaries are excellent and helpful to the general practitioner, for whom this work is especially designed. Every physician will find Progressive Medicine of great practical help in his daily work. F. P. N.

PROGRESSIVE MEDICINE. A Quarterly Digest of Advantages, Discoveries and Improvements in the Medical and Surgical Sciences Edited by HOBART A. HARE, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, Philadelphia; assisted by CHARLES A. HOLDER, M.D., Assistant Demonstrator of Therapeutics in the Jefferson Medical College. Volume II. June, 1900. Cloth. Pp. 411. Price, $2.50. Philadelphia and New York: LEA BROTHERS & CO.

READERS and friends of Dr. Daniel's journal, the *Texas Medical Journal*, are well aware that a humorous vein is found in all of his writings, his crisp, spicy style, and his happy knack of handling "the World, the Flesh and the Devil" make him a delightful writer for readers to follow. It goes without saying, his "Recollections" will make friends in all sections of the country, and not alone in the medical guild, for they appeal to all who have a good digestion, and who know how to enjoy a good hearty laugh.

RECOLLECTIONS OF A REBEL SURGEON (AND OTHER SKETCHES), or the Doctor's Happy Days. By F. E. DANIEL, M. D. Illustrated. Pages 264. VON BOECKMANN, SCHULZE & CO., Austin, Texas. 1900.

LITTLE introduction is needed for a work which has reached its sixteenth edition, and this new issue of Attfield's Chemistry will doubtless meet with a cordial welcome. For thirty-one years this book has been the trustworthy guide of students in medicine and pharmacy throughout English-speaking countries, and the demand which rendered necessary the publication of rapidly succeeding editions made it posssible to keep the work always up to date. The present edition is no exception, and a comparison with the previous issue will show on every page the changes, additions and elisions made to present today's status of its ever-developing science. Effort has been made to keep the book within the limits of a learner's manual, and the eminent author has not abated his endeavors to teach the science of chemistry as it relates especially to the fields of medicine and pharmacy. Anticipating a still wider demand for the book the publishers have placed the new edition on the market at a reduced price notwithstanding its size remains the same.

ATTFIELD'S CHEMISTRY, General, Medical and Pharmaceutical Including the Chemistry of the U. S. Pharmacopœia. By JOHN ATTFIELD, F.R.S. New (16th) Edition. In one Royal 12mo. volume of 784 pages with 88 illustrations. Cloth $2.50, net. Philadelphia and New York: LEA BROTHERS & CO.

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THE advance in rational therapeutics is ever onward, in spite of the parasites of pseudo-science which attempt to decry the newer methods of therapy and hoot at all things new or old which differ from the theories advanced by themselves. Again, practical therapeutics has to contend with the mental fads of today which attempt to usurp the field of practical medicine and build up a drugless therapy. It is, therefore, a pleasure to take up a book which places practical therapeutics upon a firm scientific basis; which bridges the gap between theory and practical bedside acquaintance with disease; which supplements the knowledge acquired at college on treatment and elaborates in natural sequence the principles of treatment. It gives in detail the most modern and approved treatment of diseases and its pressing symptoms, complications, stages and prophylaxis. It is a book of great value to the recent graduate and of help to the established physician. It is in conformity with the U. S. Pharmacopœia. As a companion work to Bruce on Treatment, it is of great value, and both volumes should be in every physician's library.

A TEXT-BOOK OF MEDICAL TREATMENT OF DISEASES AND SYMPTOMS for the use of Students and Practitioners of Medicine. By NESTOR TIRARD, M. D., F. R. C. P., Professor of Principles and Practice of Medicine, King's College, London. Adapted to the U. S. Pharmacopœia by E. QUIN THORNTON, M. D., of Jefferson Medical College, Philadelphia. In one octavo volume of 624 pages. Just Ready. Cloth, $4.00 net. Philadelphia and New York: LEA BROTHERS & CO.

F. P. N.

MESSRS. WM. WOOD & CO., of New York, announce an early publication of a complete revision of *The Reference Handbook of the Medical Sciences*. This gigantic work, originally published about fifteen years ago, met with a most hearty reception, and that it has fulfilled its mission is evidenced by the demand for its continuance. Messrs. Wood & Co. have been quick to recognize this demand and to give increased value to this excellent cyclopedic work, they have decided to have it entirely rewritten, in order to thoroughly bring it up to the times. The prospectus justifies us in saying that the New Reference Handbook will be the most complete work of its kind yet published. Fully 500 contributors will furnish material for this masterly production, which will be edited with the same careful consideration for the needs of the general practitioner by the veteran editor, Dr. Buck, as characterized the original work. It is to be fully illustrated with new and improved methods. Special paper will be used to bring out the beauty of the illustrations. Chromo-lithographs will be used in increased numbers, there being fourteen in the first volume. We have used the original work twelve years, and have found it a rare store-house of useful and practical information. The new work will certainly find old friends awaiting its coming, and will make new friends wherever it is known. The name of Wm. Wood & Co. as publishers is sufficient guarantee to insure a first-class publication up to the times in every feature. We are sure our readers will appreciate this work, the first volume of which will appear about August 15th.

F. P. N.

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Original Department.

PAPERS for the Original department should be in hand one month in advance, and contributed to THE MEDICAL FORTNIGHTLY exclusively. A liberal number of extra copies will be furnished authors, and reprints may be obtained at reasonable rates, if request accompanies the manuscript. Engravings from photographs furnished free.

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☞ Signature of contributor, for reproduction, should be sent with every article, on a separate slip; use heavy ink, and allow autograph to dry without applying blotter.

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Surgical Disinfections.

BY CARL E. BLACK, M. D.,

JACKSONVILLE, ILL.

Surgeon to Passavant Memorial Hospital, and Our Savior's Hospital.

THERE IS still so much difference of opinion regarding surgical cleanliness that any new views on the subject are always interesting and valuable. Surgeons are still far from agreement as to the practical definition of "surgical cleanliness," not to say anything of the multiplicity of views as to the best methods by which it can be secured. When the germ theory of infection first began to have enthusiastic advocates there were two extremes of view. Those of the old school ridiculed all antiseptic and aseptic efforts, while those of the new school claimed everything for all those agents which would destroy germs of infection. A little later some practical minds detected a third element in the problem—the antiseptic and aseptic value of the living tissues. The great majority of practical surgeons are receding from these extreme views and seeking simpler and more sensible methods of securing aseptic wounds. In the February, 1900, number of the *Chicago Medical Recorder*, Dr. A. J. Ochsner of Chicago, described the methods pursued by him in the clinics and private operations at the Augustana Hospital. He is a man of sound reasoning and practical sense and his conclusions are valuable. The following quotations are from a summary of his article which appeared in the May issue of the *American Journal of the Medical Sciences*.

"(a) Theoretically it is almost impossible absolutely to disinfect the skin of the patient and the hands of the operator. (b) Practically it is one of the easiest and simplest tasks to obtain a degree of surgical cleanliness that will insure primary wound-healing."

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There is danger that those who do not have an every-day familiarity with preparing the skin of patients and hands of operators and assistants may misunderstand this conclusion. This is one of the things which is simple and easy if properly and thoroughly done. On the other hand, it is difficult to get sufficient comprehension of the principles underlying this process to secure its proper execution. The process, which consists mainly of thorough scrubbing followed by the use of mild non-irritating antiseptics, is simple enough, but must be thoroughly done. Too much reliance must not be put on the germicidal properties of the patients' tissues.

"(a) Theoretically strong chemical disinfectants are indicated for the purpose of disinfecting the hands. (b) Practically careful washing with the mildest, viz., soap and water and alcohol, is absolutely sufficient and very much safer for the patient, because hands roughened by the use of the strong antiseptics are much more likely to become hopelessly septic than hands which are covered with smooth, healthy skin."

This view regarding the desirability of a smooth and healthy skin is important and should be emphasized. On the other hand, the skin of the operator's hands should not be soft and tender, but rather firm and tough. This will be brought about by thorough, prolonged and oft-repeated scrubbings, if properly done. The proper washing of the hands is difficult, because of the great thoroughness necessary. This point should be impressed on all who undertake surgery.

"(a) Theoretically it is extremely simple to keep the hands aseptic after they have been rendered so. (b) Practically there is no more difficult task in any clinic than to keep all interested hands clean after they have been disinfected."

The maintaining of disinfection of the hands after cleansing depends on the formation of the "aseptic habit." No one can expect to do aseptic surgery who cannot form this habit. The hands must never come, for an instant, in contact with any object which is not thoroughly sterilized without being cleansed before coming again to the wound. This will become almost involuntary after considerable practice in maintaining asepsis about an operation.

"(a) Theoretically sutures passing through the skin and the deep tissues underneath are a menace to the patient, because they form a direct communication between the skin which contains staphylococci and the deep tissues which are primarily sterile. (b) Practically these stitches never cause an infection, unless drawn too tightly, in which case the resulting pressure-necrosis is the cause of the mischief, because it furnishes these micro-organisms dead tissue to thrive upon."

This would seem to imply that we never have infection excepting where there is dead tissue. While micro-organisms undoubtedly thrive in necrosing tissue, that is not the only pabulum in which they grow. They will develop well in body fluids thrown out as result of operative injury, and if they attain sufficient strength will invade living tissue. The fewer sutures passing through the skin the less liable we are to have infection.

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"(a) Theoretically catgut sutures and ligatures are objectionable. (b) Practically, if applied properly and not tied too tightly by a clean surgeon with clean assistants, they are absolutely satisfactory, and not objectionable.

"(a) Theoretically it is as safe to operate upon clean cases after dressing suppurating wounds as at any other time. (b) Practically surgeons who follow this practice always have a great amount of wound-infection on account of accidental contamination of something coming in contact with the wounds."

"In order to have wounds heal without suppurating, he believes the following conditions should be considered:"

'1. The surgeon, his assistants, and nurses must be habitually clean, and the skin of their hands must be free from irritation and roughness.

'2. Their attention should constantly be directed toward the prevention of accidental infection.

'3. The surgeon and his assistants should be careful not to breathe or speak into the wounds.

'4. Tissues should not be exposed to unnecessary traumatism.

'5. Sutures should not be tied tightly enough to cause pressure necrosis.

'6. A reasonable system should be employed, so that everyone concerned can assist intelligently in preventing infection,'

DEATH OF DR. R. J. HILL.—The local profession lost another of its prominent members during the month of July, Dr. R. J. Hill. The St. Louis Medical Society, of which Dr. Hill was a member, at a special meeting adopted the following resolutions of regret and in witness of the regard of its members for the deceased:

"The St. Louis Medical Society has learned with great regret of the loss which it and the community have sustained in the death of Dr. Robert J. Hill, for many years an honored member of this body.

"Dr. Hill's many qualities of head and heart won him the respect and esteem of his fellows, which manifested itself in conferring upon him several positions of trust and honor.

"His skill and devotion to his profession procured him a large practice to which he gave his best efforts until the last days.

"We feel that in Dr. Hill's death this society has sustained a heavy loss, and desire to bear testimony to his careful judgment, honesty, kind-heartedness, charity to the poor, energy, industry, and correct professional life.

"We direct that these resolutions be spread upon the minutes of the society, and that copies be transmitted to his family and to the daily secular and local medical press."

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J. M. G. CARTER, M. D.

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Diseases of the Stomach.

BY J. M. G. CARTER, M. A., M. D., SC. D., PH. D.,

WAUKEGAN, ILL.,

Professor of Clinical and Preventive Medicine (formerly Professor of Pathology), College of Physicians and Surgeons, Chicago (School of Medicine, University of Illinois); Fellow of the American Academy of Medicine; Member of the American Medical Associat on, the Chicago Medical Society, the Chicago Society of Internal Medicine; late President of the Illinois State Medical Society, etc.

CHAPTER I.—INTRODUCTION.

DISEASES of the Stomach constitute one of the most important groups of ailments to which the physician's attention is directed. Many nervous affections, liver troubles, intestinal derangements and kidney disorders have their origin in a failure of the stomach to perform its functions properly.

Anatomy.—A brief survey of the chief features of the *anatomy* and *physiology* of the stomach will facilitate the study of its diseases. This viscus normally occupies chiefly the left hypochondrium, the epigastrium and part of the right hypochondrium, being situated obliquely with its axis more nearly vertical than horizontal. When moderately filled about three-fourths of the organ lies to the left of the median line, but when empty nearly or quite five-sixths. Above, it lies next to the liver and diaphragm, while below it is in relation with the transverse colon; behind it touches the pancreas, the crura of the diaphragm, the solar plexus and the great abdominal vessels; in front it is in relation with the abdominal wall, the liver and the diaphragm. It touches the gall-bladder on the right side and the spleen on the left. The cardiac orifice, which is covered by the liver, lies near the sternum and behind the left seventh costal cartilage. The pyloric orifice shifts its position according to the amount of stomach contents, but ordinarily it is on a level with the inner end of the right eighth costal cartilage, close to a vertical line passing along the right edge of the sternum. The fundus extends from the left fifth rib to within one to two and a half inches of the umbilicus. The lesser curvature is to the left of and nearly parallel with the spinal column. It is covered by the left lobe of the liver. The greatest vertical diameter is from four to five and a half inches (0.4 to 6 cm.). The capacity is about 1000 to 1500 c.c. or 35 to 50 fluid ounces, but it may vary between 8 to 56 fluid ounces (Ewald).

Its walls consist of four layers—mucosa, submucosa, muscularis and serosa. The mucosa or mucous layer is thrown into a series of longitudinal folds, and throughout its entire extent is covered by a single layer of cylindrical epithelium, consisting of mucous-secreting goblet cells. The tubular glands arranged vertically in the mucous membrane are lined by similar cells. The duct is about one-fifth the length of the whole tube. Frequently several tubes enter one duct. In some, especially near the pylorus, the cells lining the fundus and those of the duct secrete different fluids. The submucosa consists chiefly of loose connective tissue with blood vessels, lymphatics and nerves. The muscular layer consists of three layers

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of non-striped muscular fibers—longitudinal, circular and oblique. The serosa, or serous covering, is derived from the peritoneum.

Physiology.—The *functions* of the *stomach* are secretion, absorption and motion. So far as it affects digestion the chief secretion of the stomach is *Gastric Juice.* The gastric juice is a clear, colorless liquid which has an acid reaction and a specific gravity of 1002 to 1003. The quantity secreted in twenty-four hours cannot be stated exactly, but has been estimated at two or three pints. It varies in different persons. It contains pepsin, hydrochloric acid, mucus, mineral salts and rennet.

Hydrochloric acid occurs normally, according to Ewald, in the proportion of .14 to .24 per cent, or according to others, 2 to .3 per 1000.

Pepsin is formed chiefly by the action of hydrochloric acid on a mother substance secreted by the cells—pepsinogen.

The mucus, which exists in large amount, is secreted by the goblet cells and forms a covering for the surface of the mucus membrane.

The mineral salts (2 parts per 1000) consist chiefly of sodium and potassium chlorides; but in less quantity also calcic chloride and compounds of phosphoric acid with lime, magnesium and iron.

Rennet is the milk-curdling ferment and is capable of precipitating casein without the aid of HCl.

Some food, as milk, water, etc., is absorbed by the stomach without the necessity of transference into the intestine. Other parts of the food require the assistance of certain motions of the stomach to carry them into the intestine where the digestive process may be completed. Pepsin accumulates during the first stage of hunger and later. Pepsin and hydrochloric acid transform proteids into a soluble form of albumen called peptone—(a process of hydration). The intermediate steps of this hydration process are to form syntonin or parapeptone, hemialbumose or propeptone, and then peptone; in this latter form albumens are ready for absorption; but probably before or during absorption they are changed into serum albumen. Peptones may enter the blood unchanged, but are immediately transformed into albuminous bodies. Milk is coagulated when it enters the stomach, owing to the precipitation of the casein by hydrochloric acid and rennet. The action of rennet is greater in the presence of HCl. A lactic acid ferment seems to be present which changes milk sugar into lactic acid.

Gastric juice does not act as a solvent of starch, inulin or gums. Cane sugar is slowly changed by the gastric juice into grape-sugar, and gelatine is converted into peptone. The saliva (ptyalin) changes starch into sugar or maltose by the process of hydration Amylopsin, the diastatic ferment of the pancreas, has a similar action to that of ptyalin, but is more energetic. A minute quantity of fat is broken up into glycerin and fatty acids in the stomach, while the emulsification of fats is accomplished mainly by the bile and pancreatic juice after the food has left the stomach, but is completed by the glandular secretions of the intestines. Lactic acid is discovered in the stomach contents in fifteen minutes, or less, after digestion begins, and reaches its maximum in fifteen to thirty minutes, after which it gradually diminishes, until in forty-five or sixty minutes after taking the test breakfast of Ewald our present reagents fail to detect it. Hydrochloric acid is first detected by known tests in thirty to forty-five minutes, and

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should be at its maximum in sixty to seventy-five minutes after taking the test breakfast.

The pancreatic juice has for its function the completion of the digestion of proteids and carbohydrates in the intestines and the emulsifying of fats.

The normal reaction of the secretion of the stomach is acid; that of the duodenum (the intestines), alkaline. The flow of pancreatic juice begins when food is introduced into the stomach, and reaches its maximum in two or three hours, ceasing in twenty-four hours.

The sugar taken from the intestine and carried to the liver by the portal vein, is changed into glycogen by the peculiar "glycogenic function" of the liver cells, and stored up for future use of the system. From these cells the glycogen is carried normally (in a more diffusible form of sugar) by the hepatic vein and poured into the blood for the nourishment of the body.

The albuminoids taken by the portal vein to the liver are partly transformed into blood corpuscles. Thus, in these two great functions at least, the liver is directly related to the general metabolism of the body.

This brief review of the physiology of the stomach is sufficient to show the importance of a careful study of the various derangements of this organ and its functions.

The relation of the stomach, liver, pancreas, spleen and intestines is very intimate, and they act reflectively when diseased, or when their functions are disturbed. There is a specific activity of the cells of the stomach, the full value of which cannot be determined in the present state of knowledge; but much importance must be attached to the interference with this activity by diseased conditions. The diseased condition may affect only the function of digestion, or it may produce organic change, and thus modify the function indirectly. If the transformation of sugar into glycogen in the liver and its reconversion into sugar when it leaves that organ are not properly accomplished, a diseased condition results, and eventually some form of dyspepsia may supervene, accompanied possibly by diabetes. An interference with the formation of urea may also cause disease. If the proteids are not normally transformed into peptones, and if peptones and other tox-albumens are not arrested and decomposed in the liver, poisonous effects result. After a full meal much peptone is formed, and the effect is to produce apathy, dullness, drowsiness. Milder cases may exhibit fatigue, languor, mental dullness, and headache, especially in the occiput. Such cases require assistance in digestion or a modification of diet.

CHAPTER II.—MEANS OF DIAGNOSIS.

The diagnosis of diseases of the stomach has been obscure until within a few years, because the means used were mainly external examination, palpation, inspection, percussion, auscultation and mensuration. Sometimes the matters ejected by vomiting were examined cursorily and occasionally chemically, but the number of known reagents was so limited that the information gained was well nigh valueless. Within the last quarter of a century, however, the discovery of valuable reagents and the use of

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the stomach-tube to secure the fresh contents of the stomach for examination have led to great advances in this department of medicine.

The *stomach-tube* had been used for various purposes by Hunter, F. Bush, Weiss, Arnott, Somerville, Blatin, Canstatt, Kussmaul, Frerich and others, but it was in 1871—and by Leube—that it was suggested and used for diagnostic purposes. The field of usefulness of the stomach-tube has been so extended since then that the year 1871 may be considered as the beginning of a new era in the diagnosis and treatment of derangements of the stomach. The stiff tube used by Leube and his predecessors has rather fallen into disfavor, and a soft rubber tube has taken its place.

The majority of physicians who use the stomach-tube at the present day, prefer the soft tube. The soft tube is less likely to injure the delicate mucous membrane of the stomach, and further than that, it is more easily introduced into the organ; there is not so much pain and distress to the patient, and there is not so much danger that the patient may bite the physician's finger. In certain cases of obstruction in the esophagus a stiff instrument may be required; the same holds true with certain insane patients who make active resistance; nervous spasm of the esophagus may require the stiff instrument. I prefer, and generally use, the instrument shown in Fig. 1.

The distance from the incisor teeth to the stomach varies in different individuals, chiefly in proportion to the height; from the incisors to the fundus of the stomach is 23½ to 25½ inches (60 to 65 ctm.). The proportion of the tube which is introduced into the stomach should be 29 or 30 inches (75 ctm.) long. The external portion may be 36 inches (90 ctm.) in length, the two portions being united by a piece of glass tubing. Other excellent tubes are in use.

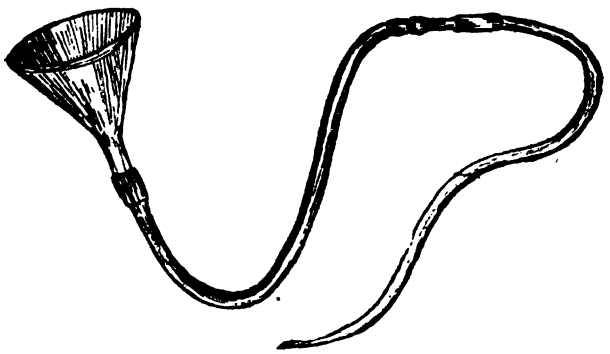

FIG. 1.—STOMACH-TUBE (COHEN'S).

Ordinarily we meet with very little trouble in introducing the flexible tube. The danger of passing it into the trachea may be remembered, but such an accident is rare. The spasmodic action and suspended breathing due to simply holding the breath need not be mistaken for true suffocation caused by passing the tube into the trachea. It is not necessary to oil the instrument, but it should be well moistened with warm water, and should be aseptic. The secretion of saliva will help to keep the tube moist, and thus facilitate its introduction.

The patient should put his head forward so as to straighten the passage, open his mouth and, when the tube is pushed to the posterior wall of

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the pharynx, he should attempt to swallow. The muscles of deglutition will usually grasp the tube, and it passes without difficulty into the upper end of the esophagus. By gently pushing, it readily reaches the stomach, if there is no stricture of the esophagus nor obstruction at the cardia. By following this method, and using proper care, the physician need seldom fail in passing the instrument, although painting the pharynx with a 10 or 20 per cent solution of cocaine may sometimes be required a few minutes before beginning the operation.

This is the method of procedure whatever be the object for which the tube is introduced, but when it is used for diagnostic purposes, the next task is to obtain the contents of the stomach.

This may be done by attaching a rubber bulb or syringe to the stomach-tube, and withdrawing the contents by suction, or the Friedlieb-tube may be used. (Fig. 5.) It is usually unnecessary to resort to such means, however, for simple pressure upon the abdomen is often sufficient, and frequently the patient can empty the stomach by attempting to vomit. It may be well to state here that this method, sometimes called the Ewald Expression Method, should not be used if there is danger of rupturing brittle blood-vessels or an existing aneurism.

The stomach-tube may be used in children and infants by selecting small tubes, soft catheters serving the purpose very well.

If the stomach is not full at the time of the operation the end of the the tube may recurve when the fundus is reached, and pass upward (Fig. 2) until the contents cannot be withdrawn. Under such circumstances the tube must be withdrawn until the end lies within the fluid contents. If the stomach is empty, as may happen at a time when ordinarily it should contain considerable fluid, no result will be obtained by expression. This is due to a too rapid transfer of the digestive products into the intestines.

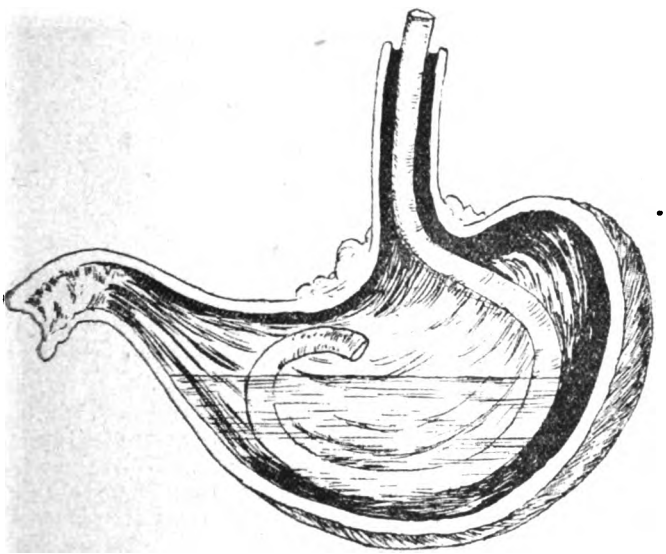

FIG. 2.—After Ewald.

The danger attending the introduction of the stomach-tube may be said to relate almost wholly to certain conditions of disease. It should not

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ordinarily be used in ulcer of the stomach; in cancer, when there is reason to believe the stomach wall is almost perforated and that ulceration has occurred; in cases of severe congestion or inflammation, when damage may be done to the mucous membrane. However, with the soft tube when it seems proper to introduce it for therapeutic purposes and even diagnostic aid, with proper care, few cases will occur where the physician will have occasion to regret its use.

Einhorn has introduced an apparatus called the stomach-bucket, for the purpose of securing small quantities of the gastric contents, when for any reason it is not possible or desirable to use the tube. It is a silver capsule, and is to be swallowed by the patient; by means of the thread attached to it it is withdrawn after five minutes. A gelatin cover may be used when necessary to prevent filling the bucket with mucus. It is very convenient in some cases. (Fig. 3.)

Stomach contents should be examined for:

1st. Food debris and undigested food.

2d. Total acidity.

3d. Free hydrochloric acid.

4th. Organic acids—lactic butyric, acetic.

5th. Combined hydrochloric acid and acid salts.

6th. The products of proteid digestion—syntonin, propeptone, albumoses, peptone.

7th. Presence of pepsin and rennin, or, if they are absent, their pro-enzymes.

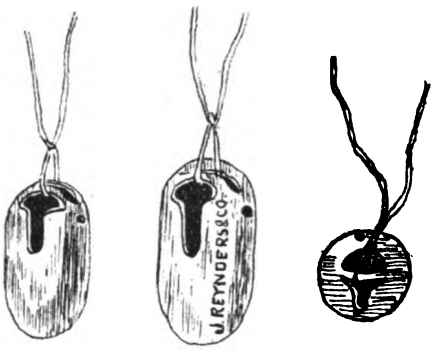

FIG. 3.—Einhorn s Stomach-bucket.

8th. The products of starch digestion—dextrin, erythrodextrin, achroödextrin and maltose.

9th. Presence of bile, mucus, pus, blood, bacteria and the like.

10th. Fragments of mucosa.

11th. Fragments of neoplasms or tumors.

Food Debris.—The products which form debris, or the refuse of undigested food may indicate a diseased condition of the stomach, or retarded digestion, if found in the viscus after seven or eight hours.

Chemical Examination of the Stomach Contents.—First, it is necessary to remember that HCl is not usually present in the stomach during fasting; and, second, that our present known reagents do not detect it in the early stages of digestion, i. e., during the first fifteen or thirty minutes. It may be stated here, also, that HCl is absent in atrophy of the peptic glands and in most cases of carcinoma of the stomach, especially in the later stages of the disease. The presence of HCl in the stomach is normal, but the quantity may vary, the proportion being 0.14 to 0.24 per cent. Lactic acid, acetic acid, butyric and other fatty acids occur more particularly at the beginning of digestion, during the first forty-five minutes.

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In order to discover the presence or absence of these normal compounds it has been found necessary to give the patient some sort of test-meal. It is true that the irritation produced by passing the tube is sufficient to cause a secretion of HCl, but the examination should usually include a search for other elements as well, and resort to the test-meal will produce the best results. Of the many suggested, perhaps the best is the test-breakfast recommended by Ewald and Boas. This consists of an ordinary roll, about 540 grains (35 grammes) weight and two-thirds of a pint (300 c.c.) of warm water or weak tea without milk or sugar. This should be given after a fast of twelve or fifteen hours. I usually direct my patients to take no breakfast if I can see them in the forenoon; but if I see them in the afternoon I advise a light, liquid breakfast and no dinner. In very weak or feeble patients the fasting should not be rigidly observed for so long a time. This meal furnishes the elements for which we search—albuminoids, sugar, starch, salts and non-nitrogenous extractives. This meal should be taken one hour before the introduction of the stomach tube. The amount of fluid in the stomach of a healthy individual one hour after taking the test-breakfast is about 1⅓ oz. (40 c.c.), but may vary one-half oz. (15 c.c.) either way.

Germain See's Test-Meal.—This consists of 60 to 80 gm. of scraped meat, and 100 to 150 gm. of white bread. Make examination two hours after eating.

Leube-Riegel Test-Dinner.—Soup, 400 c.c.; potatoes, 30 to 60 gm.; beafsteak, 100 to 150 gm.; one roll, 40 gm. Examination in three or four hours.

Having obtained the *stomach contents* they should be filtered, although this is not always necessary. The filtrate is a watery fluid varying in color from a perfectly clear liquid to a yellowish-brown. The reaction is normally acid. Ten or fifteen minutes after eating the acidity is due to acid salts or free acids, or both. If it is due to free acid, it is chiefly lactic acid; and up to 30 or 45 minutes this acid predominates, and the known tests for hydrochloric acid give negative results; but after that time the HCl color-tests begin to react, and at the end of one hour the presence of HCl is well marked in normal cases. The lactic acid disappears gradually and the HCl increases as slowly; and probably with more delicate reagents HCl will be observed nearer the beginning of digestion and lactic acid considerably later than one hour after the ingestion of food. The amount of free HCl increases during the course of digestion, reaching its maximum, perhaps, one to three hours after eating. Our present test for lactic acid would show a pathological condition of the stomach if the reaction was marked at a later period than forty-five minutes. At a time when normally the acidity should depend upon the presence of HCl, in certain pathological conditions, or on account of the quality of the ingesta it may be due to an excess of acid phosphate or other acid salts.

Total Acidity.—It is generally desirable to know the total amount of acidity of the stomach contents. If the reaction is acid, as shown by the blue litmus paper, or Congo-red, make the test for acidity as follows: (a) Fill a graduated burette with a decinormal solution of caustic soda. (b) Make a 1 per cent solution of phenol-phthallein in alcohol. This solution,

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which is slightly opalescent, remains colorless in acid solutions, but becomes carmine in alkaline.

To 10 c.c. of filtered contents in a small glass beaker add one or two drops of phenol-phthallein solution (b). The soda solution (a) from the burette should then be gradually added until the characteristic red color appears and remains permanently after shaking. The number of c.c. of soda solution thus used indicates the total acidity; and that figure multiplied by 10 will give the total acidity of 100 c.c. Normal total acidity varies from 40 to 65, the number of c.c. of soda solution required to neutralize 100 c.c. stomach contents

If the acidity is due to HCl alone multiply the number of c.c. of the decinormal soda solution required to neutralize 10 c.c. of the filtrate, by 0.003646, and this again by 10; the product will be the percentage of HCl in the stomach contents, which is normally 0.14 to 0.24 per cent. Thus, if it requires 5.5 c.c. of the sodium solution to neutralize the 10 c.c. of the stomach contents, multiply .003646 by 55 (10 x 5.5), and the product, 0.20, equals the per cent of acidity. As this product falls between 0.14 and 0.24 the acidity is normal. If the result is above or below the figures given here, the condition is pathological.

When the stomach contents show acid reaction it is desirable to know whether the acidity depends upon *free acids* or *acid salts*. The best tests for this purpose are found among the aniline dyes.

Tropeolin.—This is a powder, which, when dry, has a beautiful orange color; but in a saturated, watery or alcoholic solution it assumes a dark yellowish-red color. In the presence of free acid, 1 part to 4000, this agent gives a dark brown color; while in the presence of acid salts, it becomes a straw color. With this test we can determine whether free acids (hydrochloric or lactic) are present.

Congo-red.—In powder this reagent has a greenish-red color like the ordinary aniline dyes. In solution its color is dark-red, brownish red or peach-red. Use a 1 per cent solution. This reagent is not affected by the presence of acid salts. The reaction is more delicate than that of tropeolin; the characteristic color, a dark or sky blue, being shown in the presence of 1 part to 10,000. The greater the percentage of acid the darker the color.

Test papers may be prepared by moistening strips of filter paper in saturated solutions of these reagents. In each case the strip should be put into the solution and made thoroughly wet; it should then be allowed to dry slowly without heat. To make the test with either of these papers, moisten a strip in the fluid to be tested; the test is negative if the characteristic color does not appear. A gentle heat over a spirit lamp will facilitate the operation and aid to bring out the color. The solution may be used instead of test papers, as follows: Pour 5 to 10 drops of the color solution into a test-tube, then add 15 to 30 drops (1 or 2 c.c.) of the filtered stomach contents.

The presence of salts and albuminoids, especially albumose and peptone, will decidedly affect the delicacy of these reactions; certain salts combining with the dyes, while the albuminoids unite with the free acid and disturb the reaction.

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Determination of Hydrochloric Acid.—Methyl violet (1 per cent solution) turns blue in the presence of HCl.

Boas' test is resorcin 5.0, sacch. alb. 3.0, alcohol 100.

Color test is cherry-red. Test positive in 1 to 20,000 of solution HCl.

Gunzburg's reagent is perhaps the best of all those which have been offered for the detection of HCl; the solution is made as follows:

℞ Phloroglucin ..... gr. xxx (2.00)
Vanillin ..... gr. xv (1.00)
Absolute alcohol..... ℥ i (30 00)

The solution has a pale yellow color and a vanillin or fresh pine-wood odor. It should be kept in a dark bottle, as exposure to the light for a long time causes it to assume a dark golden-yellow color. This, however, does not materially impair its value. A drop or two of this solution in a small porcelain dish with an equal amount of HCl solution produces a bright-red color, and often small red crystals will be observed.

Method.—A drop of this reagent with normal stomach contents may cause no change at first, but by gently heating over a flame in a porcelain dish, or on filter paper, a beautiful red tinge or red stripes will appear at the margin of the evaporating fluid. This test is evidence of free HCl; it is not simulated by albuminoids, nor changed by the presence of salts if they are in usual proportion, nor is it affected by organic acids. Blowing on the dish hastens evaporation, and the red stripes will appear at once. The color is always bright red, unless the amount of test solution and stomach contents or HCl are very small, when it may assume a pale rose-red tinge. If brownish-yellow or brownish-red color occurs it indicates overheating and the combustion of organic substances. Strong heating and evaporation of any albuminous substance causes a decided *central* red coloration, whlch must be distinguished from the *peripheral* red tinge or stripes caused by the HCl reaction. If hydrochloric acid exists in connection with albumen or peptone, the HCl reaction occurs first when this test is applied and the *central* red does not occur until the affinity for the acid is completely satisfied.

Gunzburg's test is more delicate than any of the other reagents except that of Boas, acting in the presence of 1 part HCl to 20,000 of stomach contents or solution. The amount of HCl can be determined approximately by reducing the strength of the stomach contents fractionally by dilution with water, thus: If the phloro-glucin-vanillin test reacts when the stomach contents are diluted with an equal quantity of water, i. e., diluted one-half, but will allow no further dilution, we know that HCl occurs in the ratio of 1 to 10000. If this solution can be diluted again one-half, but no further, the relation will be 1 to5000. A rough general idea of the amount of HCl present will also be obtained by the relative intensity of the red color at the time the test is made.

When food is introduced into a healthy stomach an abundance of hydrochloric acid is secreted. Some of it combines with bases or organic substances, but after all affinities are satisfied some of it remains uncombined, that is free. If no free HCl is found the condition is pathological. It is always desirable to know in these conditions whether the acid is absent altogether, or whether it is only deficient in amount.

(TO BE CONTINUED.)

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The Symptomatic Value of Œdema of the Thoracic Walls.

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A Clinical Lecture.

Translated by Dr. Thos. Linn, Nice, France.

IN Semeiology the slightest detail that is observed in disease has its importance, it being understood that a symptom is only worth noting when it can be attached to the other symptoms. In reading the different works on pathology, you will find that but very little is said of the localized œdemas seen on the thorax, except that some notice will be made of those that relate to some purulent effusion close to the œdema; but if it is true that a localized œdema seen on the chest often leads to a purulent pleurisy, still you must by no means conclude that this is so in every case, when you find such an oedema.

What then is the real diagnostic value of such oedema? Before going into the semeiology of the question, it will be well to see what the general appearance of these oedemas is. They may be found on all parts of the thoracic wall, that is, in connection with the pleura and the pericardium, but according to the case, they are more or less in extent and occupy different regions. Sometimes they may extend all over one side of the thorax, but this is exceptional, as a rule they are localized in a circumscribed region, even limited to one or two rib spaces, very often they are found in the sixth and seventh intercostal spaces on the right or left, and not only is this a usual condition, but it is nearly always found to be in a line with the axilla. Again it will be found that the oedema is limited to the lower part of the thorax about the level of the costo-diphragmatic region, posteriorly, or again the localization will be in front and to the left, about the præcardial region. Finally in certain cases, you will remark that the oedema is about on the level of the inter-lobar fissures; in these cases they look like a band lying in the direction of the inter-costal space. These different localizations should be remembered because the knowledge of the usual seat of these oedemas will often allow you to judge of their relation to the internal parts affected, such as the pericardial, inter-lobar and diaphragmatic regions.

Having found an œdema of the thoracic walls your first idea will be to use percussion, to see how far the dullness extends. Let us see what the general aspect of this œdema is? Usually it is not much raised above the surface and your finger leaves an impression, that remains, it is not plainful, is soft, and the skin is white. Or again the œdema will be diffuse and the finger mark is not persistent, for the œdema resists pressure. There is also pain and the skin is a rose color. Sometimes besides the œdema you will find that the intercostal space is thinner than normal, and when

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the patient coughs the projection increases. This must not be confounded with the condition in which the rising is isochronal with the heart's pulsations, this condition has been called pulsating empyema; in the larger number of cases the first condition mentioned denotes a purulent pleurisy. Finally, where the œdema is seen, you may also see a sort of venous circulation, similar to that found when there is hepatic trouble, this is simply a sign that the circulation of the external veins has been prevented by the œdema.

In most of the cases cited, we have said, that there is no pain upon pressure, but there are cases where there is pain, it is true that it is not the œdema that causes the pain, but its presence has a symptomatic value, for instance, when the chondro-sternal or the chrondo-costal articulation is the seat of arthritis, pain and swelling will be found. An œdema may be seen also about a thoracic contusion or about a suppurated gummata.

Besides these there is a variety of œdema of the chest walls which is important to recognize; it also, is painful on pressure, and you will find that the skin has an eruption on it, that is more or less confluent, this is herpes or zona thoracica (herpes zoster, or shingles). As a rule you will diagnose this easily, but sometimes the eruption has gone and you will only see the œdema, this should not deceive you for the cicatrices of the eruption should be found and you can then say what the cause has been.

These are the general considerations that must be first recognized when you find an œdema of the thoracic walls; you see there are a number of elements to be taken into account. The seat, the extent, the consistence, the sensibility and the aspect of the skin. Also the state of the intercostal spaces, the ribs themselves and even the condition of the deeper organs. It is only by taking all these factors into account and grouping them that you can get the correct semeiology of oedemas of the chest walls.

Let us now see what relation the oedema of the thoracic walls has to purulent pleurisy: While it is true that this œdema is found in such cases, it is *by no means constant*. I can give, as a proof, the case of our patient in bed No. 18 whom you saw last week and who died in a state of profound anemia after having had grippe and we supposed typhoid fever following it; at the autopsy there were no lesions of Peyer's patches or any other sign of typhoid, but a considerable purulent pleurisy of which we had no signs in life; so that the famous constant (?) and pathognomic sign failed us. Is it pathognomic when it does exist? Yes, as a rule, but there are differences even here, and I can say that an œdema is not positive proof of suppuration and effusion, but it so often accompanies pleural suppuration that it should be described to you. This is how you will see it as a rule: Suddenly after a chill, or else slowly after an attack of grippe, or again after long fatigue or hard work, a person will be taken with a stitch in the side with fever and trembling; on examination of the chest a pleural effusion will be found and a sero-fibrinous liquid can be drawn off, so that you will say "an ordinary pleurisy;" but after a certain time the effusion persists, the fever continues, the patient gets paler and paler and loses flesh, a lead colored face meets you, with profuse perspiration, and diarrhea follows, while an œdema will persist on the chest walls. This

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will occupy the sixth or seventh intercostal space and a puncture here will give you pus; this is of the greatest importance; mark well the location of this œdema and operate at once. What will happen if you do not? Well, the intercostal space will thin out and perhaps the point will open itself, which shows you how important it is to attend to it yourself; not only will attention to this œdema make the proper diagnosis for you, but also shows you the place to make the puncture and the necessity for it.

I have shown you how often it is only at the auotpsy that these pleurisies of a purulent nature are found, so that attention to them will save lives. Now and then they are vomited, but you must not hope for this to occur, but act at once, the importance of œdema of the chest walls as a sign of purulent pleurisy is particularily great when the case is one of a cystic order, such as a diaphragmatic one; these pleurisies may rest in a latent state for a long time, and the pus will accumulate between the base of the lung and the diaphragm (which is turned up like a cupola,) one to two quarts of pus have been known to form in this way without any external sign showing its existence, until one day the patient vomits it and dies, when the post-mortem shows the cause of death. In such cases it is important to search for the localized œdema of the base of the thorax, when found it will show where to make the puncture, and perhaps cure the case.

This deduction, as regards the localization of the pus, is quite exact in the great majority of cases. A striking example is seen in inter-lobar pleurisy and in partly encysted cases. In interlobar pleurisy when the collection of pus is great enough to see it is on the lateral wall of the chest Jaccoud has shown the band of matity or dullness on percussion, and above and below it resonance. Well when there is œdema of the walls it comes in this form also, and unless a vomiting fit takes place bursting it and showing what is the matter this œdema is the only sign you have to discover it. It is the same in encysted pleurisy, and it is just exactly your care in finding this œdema that will enable you to make a diagnosis.

Before showing you that œdema can exist here, that is not at all purulent let us describe the symptoms when there is a purulent pleurisy and how it acts when it finishes, as it often does by vomiting. Take for instance a purulent pleurisy of the large pleural cavity:—In a patient that has had a latent pleurisy, for forty days there is no œdema, but suddenly vomiting comes on and the following days you find a pneumothorax, or rather a pyo-pneumothorax. Very rapidly now you get the signs of the affection I speak of, but which I will not dwell on now, and you may have besides a violent inflammation of the pleura of a sub-acute order; the chest walls become painful and red while an œdema is observed all along one side of the thorax; it will look like a large phlegmon of the sub-pleural structure and like those seen in surgical cases. This is the indication of a very rapid suppuration, or one that has been aggravated by being grafted on a pleura that has already been suppurating and suffering; these patients most always die, and yet they could be saved if you make a quick and certain diagnosis and act in time. So you see that œdema of the chest is of the greatest value not only to tell you what to do, but just where to do it.

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I have already said that this œdema of the chest was not always a symptom of suppuration of the pleura and in certain cases you will get upon puncture a liquid of a sero-fibrinous nature. While these cases do not generally present the regular symptoms of purulent pleurisy, still as all sorts of exceptions are possible, it is well to make a puncture and assure yourself of the nature of the effusion.

But while the œdema does not always prove that there is suppuration it is an indication of a special disposition of the effusion, and then you know that you have a regular pleurisy, that has got into the mediastinal space and has produced an œdema by the mechanism that I have often described to you. In such cases there is usually a collateral venous circulation about the œdema.

The semeiological value of an œdema is quite different when it eixsts outside of any inflammation of the pleura. When you find one think at once of a tumor of the mediastinal space; this tumor prevents proper circulation on the intercostal and parietal parts of the pleural and the œdema takes place, puncture will give a liquid similar to that from hydrothorax.

An important fact is, that the compression of the intercostal nerves in such cases causes a neuritis that will sometimes bring about a herpes zoster or zona. You see then what interest is attached to a case that has this symptom with an œdema and perhaps a collateral circulation about it this puts you at once upon the fact that there is a deep compression and shows you that there is a mediastinal tumor.

I have only now to conclude by giving you some points on the pathogenesis of these localized œdemas in the different cases. For the purulent effusions: We may admit an infiltration from pocket to pocket, an œdema of lymphatic order at first, that is sub-pleural and then passes through the intercostal spaces. Ranvier has also shown that there is a vaso-motor paralysis, and the first part of such œdemas may be due to a vaso-motor dilatation.

In the œdemas with hydrothorax, there is an evident slowing of the circulation, which is easy to understand, the inter-costal and sub-pleural veins are tributary to the azygos veins, and consequently any compression in the mediastinum brings about a slowing of the circulation here and causes an effusion into the pleura and an œdema of the walls of the chest.

As to the prognostic value of œdema of the chest walls, it has none, for all the gravity of the case depends upon the cause of the effusion. You will see then that œdema of the chest walls does not prove anything of itself but united to the other symptoms, that the patients present, it acquires a significance of great importance to the exact determination and cure of the malady.

THE degree of Doctor of Laws has been conferred by the University of Michigan and Dickinson College upon Dr. Lewis Stephen Pilcher, of the Methodist Episcopal Hospital, of Brooklyn, and editor of the *Annals of Surgery*.

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Reports on Progress.

COMPRISING THE REGULAR CONTRIBUTORS OF THE FORTNIGHTLY DEPARTMENT STAFF

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SUMMER DISEASES OF CHILDREN.

BY FRANK PARSONS NORBURY, M. D.

Formerly Resident Physician Pennsylvania Institution for Feeble-Minded Children; Formerly Assistant Physician Illinois Central Hospital for the Insane; Physician to Oak Lawn Sanitorium and Passavant Memorial Hospital; Neurologist to Our Savior's Hospital; Lecturer Psycho-Physics, Illinois College.

AND EGBERT W. FELL, B. S..

JACKSONVILLE, ILL.

The following articles appeared in the July number of the *International Medical Magazine:*

Prophylaxis of Summer Diarrheas of Children (Miller).— Improper food and feeding are the principal causes, only 3 per cent of fatal cases occurring among breast-fed infants. Infants should be nursed as long as possible, and should not be weaned in the summer, or when summer is approaching. In artificial feeding pure fresh milk should be used, otherwise the milk must be Pasteurized or sterilized, preferably the former if it can be properly done. Absolute cleanliness of bottles, nipples, etc., is necessary. Children should eat less during hot weather and should be given plenty of water. The food should be simple, milk modified in various ways, constituting the bulk of the diet until the twelfth month, and little solid food being allowed until the eighteenth or twenty-fourth month. Directions for feeding should be explicit, and the physician should see that they are carried out. Fresh air and sunshine are essential, the baby spending the greater part of the time in the open air. Daily baths, cleanliness of apartments, disinfection of napkins should be carefully looked after. The outer clothing should be light and loose, that next the skin of light flannel. An abdominal band of flannel should be worn the first year.

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Artificial Feeding of Infants (Hirst).—In a case of summer diarrhea treatment is divided into (1) cleansing of the intestinal tract; (2) proper adjustment of food; and (3) hygienic. The first condition is usually filled by twentieth-grain doses of calomel every hour. In severer cases enemata, either hot or cold, may be used three or four times a day. (2) It is usually necessary to use modified milk, the following being advised: Cream, 4 ounces; milk, 1½ ounces; lime-water, 1 ounce; water, 13½ ounces; milk sugar, 8½ drachms. Add to each bottle of this, pancreatin, 2½ grms.; soda bicarb., 4 grms.; and milk sugar enough to make a percentage of 6 per cent, then Pasteurize, raising the temperature to 170° F. (3) Plenty of fresh air and sunshine, excursions on the water, removal to the country or seashore, if possible.

The Use of Opium in the Summer Diarrheas of Children (Crandall).—Opium is contraindicated in the first stages of acute diarrhea, before the intestinal canal has been freed from decomposing matter; when the passages are infrequent or of bad odor; when there is a high temperature or cerebral symptoms are present; when its use is followed by elevation of temperature or the passages become more offensive. It is indicated when the passages are very frequent, with pain; when the passages are unnecessarily frequent, large, and watery; in dysenteric diarrhea preceded by castor oil or a saline; in late stages with small, frequent, nagging passages; when the passages consist largely of undigested food, and the bowels act as soon as food is taken into the stomach. It should be given alone and at long enough intervals to permit the effect to partially subside. The preparations most available are paregoric and the deodorized tincture. Dose should be small.

Bacteriologic Features of the Gastrointestinal Affections in Infants (Babcock).—Bacteria, especially the bacillus coli communis and the bacillus lactis acrogenes, are always found in the infant's alimentary tract, but are not essential to the digestive process. The tract is sterile in the newborn infant, the organisms being introduced with the milk. Ordinarily large numbers may be introduced in this manner without causing trouble, but when the infant's resistance is lowered by exposure to extreme heat, by certain dietetic changes which affect its nutrition, by exhaustive measures, or when the number of organisms is excessive, the erstwhile saprophytes acquire intense virulence. Besides the two mentioned, the bacillus proteus vulgaris and various forms of cocci are frequently found. The author advises the examination of smear preparations of milk and the feces from which an approximate knowledge of the cause and severity of the process may be obtained. With regard to prophylaxis he advises careful watching of the milk supply. The efficiency of sterilization is debatable. Pasteurization is of great value; the milk should be rapidly raised to the proper temperature, and this maintained for twenty minutes, and then rapidly cooled.

Diseases of the Skin Complicating the Infantile Gastro-Intestinal Disorders of Summer (Scramberg).—Seventy-five per cent of cutaneous diseases of infants are due to perverted alimentation and digestion. Eczema

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is most commonly observed in the vesicular form upon the face, arms, hands and lower extremities. The vesicles rupture and form scabs. Itching is great; scratching produces lines of bloody excoriations. The papular form usually occurs on the trunk and extremities, and the pustular on the face and scalp. In many cases the diet is the cause; there may be overeating, or the milk may be poor; table diet resulting in constipation, decomposition, and ptomain absorption is frequently responsible. Diet and feeding should receive proper attention. Calomel, one-sixth grain, should be given three times daily for several weeks. The following lotion should be used every two hours:

℞ Resorcini ..... ʒi
Glycerini ..... ʒi
Zinci oxidi ..... ʒii
Aquæ calcis, q. s. ad ..... ℥vi

At night the following ointment is applied:

℞ Ac. carbolici ..... gr. vii
Hydrarg. chlor. mite ..... gr. xv
Pulv. zinci oxidi .....
Pulv. amyli .....aa ʒii
Petrolati ..... ʒss

Soap and water should not be used. For erythema intertrigo a wash of boracic acid should be used and followed by a dusting powder. At night apply the following:

℞ Ac. salicylici ..... gr. x
Pulv. amyli .....
Zinci oxidi ....aa ʒii
Petrolati ..... ʒss

Miliara is caused by obstruction of the sweat ducts followed by inflammatory charges, and is probably due to the elimination by the sweat glands of toxins absorbed from the intestinal tract. Treatment consist in regulation of the digestive functions; light clothing should be worn; locally apply:

℞ Resorcini ..... ʒi
Zinci oxidi ..... ʒiii
Ac. borici ..... ʒss
Glycerini ..... ʒi
Spts. vim. rect ..... ʒi
Aquæ, q. s. ad ..... ʒi

M. S.: Use three or four times a day.

When furunculosis complicates prickly heat syrup iodide of iron and the hypophosphites may be used with benefit. The furuncles should be incised; locally an ointment of ichthyol should be used.

Initial Forms of Tubercular Laryngitis.—(Kyle, *Inter. Med. Mag.*, March, 1900.)—If a persistent, hacking cough, dysphonia and eunuchoid voice are unexplainable on other grounds tuberculosis should be thought of. Congestion of the vocal cords, persistent and not effected by treatment is tubercular. Or the process may show itself first as a monocorditis, as a nodule on the cord, as a sensation of a lump in the throat, or as dysphasia without other symptoms. The tuberculin test should be used with great care.

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A Mark of Progress.—One fact of enormous importance that has been developed by the widespread discussion concerning the proper treatment of infantile diarrhea is, that it is positively harmful to administer food until the very acute inflammatory condition of the gastro-intestinal tract has subsided. In these cases the mucous membrane is swollen, congested, covered with thick, tenacious mucous and the fermenting products of food decomposition. In such instances food acts as a foreign body and therefore aggravates the existing conditions. The first rational step in treatment is to check intestinal fermentation, allay congestion and favor the healing of the ulcerated intestinal mucous membrane. Gray's Glycerine Tonic Comp. accomplishes these objects in a surprisingly short time because its ingredients have a selective specific action upon the seat of inflammation. Administered early in ordinary forms of catarrhal enteritis it will frequently prevent the progressive development of the more severe and intractable forms of the disease. This remedy paves the way for the successful administration of intestinal astringents; it removes the foreign materials covering the mucous membrane so that astringents have an opportunity of coming immediately in contact with the diseased surface. After the acute period of the disease has subsided, Gray's Glycerine Tonic Comp. can be confidently relied upon to repair the waste of tissue and energy occasioned by the disease.

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Seng surpasses anything I have ever used in cases where there is a deficiency in the functions of digestion and assimilation. It gives the stomach vigor and tone. I keep it on hand at all times.—J. H. BRENTON, M. D., Stiner, Tenn.

The Gout.—A drawing under the above title first published by H. Humphrey of London in 1799, has recently been presented to the profession by the Battle Company of this city. The picture is most ingeniously conceived and executed, and is as thrilling in its way as is gout itself. The engraving is handsomely gotten up. Physicians who have failed to receive a copy should drop a card to the Battle Co., making their wants known.

The Anodyne Treatment of Acute Peritonitis.— McCaffrey ("The Etiology, Pathology and Treatment of Acute Peritonitis," 1899) observes that the most pronounced indication for treatment in peritonitis is that for the relief of pain. Blisters and counter-irritation, the older resorts, are practically useless. Hot-water bags and poultices are far superior, but the relief they afford is only temporary. In some cases the ice-bag is more grateful than hot applications. But whether heat or cold is employed, it should be relied upon only until other lines of treatment can be instituted. Papine should be given in teaspoonful doses every hour, and the doses repeated frequently enough to afford the desired results. Relief from pain, short of narcosis, should be sought, and this is generally easily obtained by proper dosage. Papine does not produce nausea, but rather prevents this symptom. In the event of the development of more or less prostration, a proper stimulant, such as strychnine or nitro-glycerine, should be judiciously employed.

Bacterial Diarrhea.—Dr. I. J. Jones, of Austin, Texas, (*New York Medical Journal*, September 16, 1899) reports the following interesting case of this affection: A boy, aged two years, was attacked with symptoms almost choleraic in their intensity. The temperature was 104° F. and there was severe nausea. Calomel about one-half grain to a grain was given, being placed on the back of the tongue. Tepid baths were administered at intervals of four hours until the temperature was reduced to almost normal, which was in about twelve hours. The bowels were irrigated with a saline solution through a soft rubber catheter every four or five hours until the lower bowels were thoroughly cleansed. No food except sterilized milk was given for the first twenty-four hours, after which lacto-somatose was administered in one-half a glass of boiled water. Improvement was immediate and marked until the fourth day, when a relapse occurred owing to the patient eating heartily of some candy covered with bacteria laden dust. The temperature at one time reached 105° F. and there were present bloody mucous diarrhea, intense nausea, and severe prostration. Calomel was given as before and mustard applied to the entire abdominal surface. The calomel acted very promptly and the nausea ceased at the same time. Intestinal irrigation, tepid baths, etc., were resorted to as indicated, and lacto-somatose was administered as before. Further convalescence was uneventful, though, owing to the child's feeble condition, somewhat protracted. In this case lacto-somatose constituted the sole diet for one week, and was taken with increasing relish all the time.

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HAY FEVER.—It is surprising how many people are made absolutely miserable throughout the late summer months by this peculiar and distressing malady. Relief without the necessity of a change of climate can be given in a great many cases if the right course is pursued. Those who are interested should write the Globe Manufacturing Co., of Battle Creek, Mich., for full particulars regarding their nebulizers, one of which is shown in accompanying cut; also their system of treatment for Hay Fever and all diseases of the nose, throat, bronchial tubes and lungs.

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Issued Tenth and Twenty-fifth of Every Month by the Fortnightly Press Co.

UNDER THE EDITORIAL DIRECTION OF

FRANK PARSONS NORBURY, M. D. AND THOS. A. HOPKINS, M. D.

Secretary: CHARLES WOOD FASSETT, M. D.

A COSMOPOLITAN BIWEEKLY FOR THE GENERAL PRACTITIONER

Editorial Offices in St. Louis, Chicago, Cincinnati, Jacksonville, St. Joseph, Kansas City, and Pueblo, where specimen copies may be obtained and subscriptions will be taken.

Address all business communications to the Fortnightly Press Company.

Address all contributions and books for review to the Editors, Suite 312, Century Building, Saint Louis.

Paris: U. S. Press Building, Espanade des Invalides, Paris Exposition.

Volume XVIII AUGUST TWENTY-FIFTH Number 4

Editorial Department.

NOW is the season of discontent with the hay-fever victims, when thoughts turn to relief from its harassing disturbance. The recent literature on the subject has not added much to our knowledge of its etiology, nor advanced us very far in improved therapy. However, the results achieved along the lines advocated by Hollopeter have proven so eminently satisfactory, that it seems that his theories are certainly rational and reliable. In a recent article, "Hay-fever—Its Preventive Treatment," Hollopeter (*International Medical Magazine*, June, 1900) this author says he is a firm believer in the local origin of the disease, and attaches great importance to personal peculiarities. His treatment consists in rendering the mucous membrane of the nose and throat aseptic, thus preventing the absorption of ptomains. Treatment should be begun a week or two before the time of the attack, the time varying with different patients. The naso-pharynx should be carefully studied, and if no extensive lesions exist is thoroughly irrigated, using an air-pump, twenty pounds pressure, with return spray. A spray from a hard-ball atomizer is then directed into the nose, in both cases a two per cent Dobell's solution being used. Following this the whole surface is mopped with absorbent cotton dipped in a saturated solution of boric acid. Other antiseptics may be used, the following being very efficacious:

Hay-fever.

℞ Adrenals (Armour's) desiccated..... ʒ i
Acid boric..... gr. xvi
Cinnamon water..... ʒ iv
Camphor water (hot)..... ʒ i
Distilled water (hot) .....q. s. ad ʒ ii

Macerate for four hours, then filter.

To the whole of the membrane previously treated is applied an oily mixture having petroleum for its base with camphor, menthol, and oil of palmetto in solution.

Gleason, of Philadelphia, attacks the disease from another standpoint, viz., the uric acid theory advocated by Bishop, of Chicago, and in the August number of the *International Medical Magazine*, he says:

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Somewhat recently the attention of the profession, chiefly through the writings of Bishop of Chicago, has been directed to the fact that the neurotic condition of the hay-fever patient and the hyper-sensitiveness of the nasal passages are often due to an excess of uric acid in the blood, and that this excess could be eliminated by the use of mineral acids. Probably any mineral acid will answer the purpose, but two suggest themselves as likely to be peculiarly efficacious. Hydrobromic acid, because of its sedative qualities, and nitro-muriatic acid, because it is thought to limit the production of uric acid. The author's experience is limited to nitro-muriatic acid, from which he seldom fails to obtain excellent results when administered in doses of from three to five drops of the freshly prepared concentrated acid after meals, and sometimes at night. The results are apparent within forty-eight hours, and the relief of all symptoms is usually sufficient to permit the patient to stay at home and attend to his ordinary duties in comparative comfort. Between attacks the general health should be improved, and any abnormality of the nose corrected. Hyperesthetic areas of the mucous membrane may be destroyed, either by the application of a 10 per cent solution of chromic acid, or the use of the galvano-cautery. Temporary relief may be obtained from the use of local anesthetics and from the use of suprarenal extract.

Here are presented treatments calculated to give help to weary sufferers, and we hope our readers will avail themselves of the excellent suggestions of these two authorities. F. P. N.

The Dowie Delusion.

A "PREACHER" named Dowie, according to current history, undertakes by means of a power he boldly calls "divine," to cure every manner of disease—except that of an unbridled tongue and a contentious spirit. This, according to his story, is done without money and without price; though in five years he himself has passed from a life of penury to a life of plenty. If the townspeople who are his followers withhold their offerings he curses them in the name of God, and in extreme revenge on the State which does not appreciate his services, he threatens to draw off the unsuspecting portion of the populace and establish a community which will pay him perpetual adoration—as well as the fruits of their sacrifice and toil. (*Ram's Horn.*) The history of Dowie is interesting reading, and we further quote from the *Ram's Horn* a sketch of this man and his doings, all of which proclaim Barnum's assertion, that the people like to be humbugged:

> When the tidal wave which rolled in upon Chicago during the great World's Fair of 1893 had retired it left upon the shores a miscellaneous wreckage amongst which were men and goods from every part of the earth. Amongst this human flotsam and jetsam was a man of unique personality, whose name has become more or less known to the western world as John Alexander Dowie. His origin is not obscure but it is sufficiently remote to prevent any particular facts being known concerning his early career. It is generally assumed that he comes of Scotch ancestry, though he betrays very few characteristics of that honorable people either in his face, speech, char-

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acter of mind or heart or manner of doing business. He claims to have received a liberal education in the schools of Edinburgh, Scotland, though the evidence of this education is not apparent in his use of language or argument. However, he seems to have been admitted to the ministry of the Congregational Church in Australia, where he labored with doubtful success until 1888 or thereabouts, when finding public opinion in Australia and New Zealand very hostile to his manner and methods, he came to the United States by way of California. During the interval of 1888 and 1893 his work was that of a strolling evangelist, with temporary stations on the Pacific coast, and intermediate points between there and Chicago, with brief missions at Evanston, Illinois, Minneapolis, Minnesota, and Milwaukee, Wisconsin. The chief feature of his ministry has been the emphasis which he has laid upon the gift of healing the body, and there is no question that whatever may be the source of his power, and of this, we will speak later, dozens and hundreds of people have been cured of mental and possibly physical disease by his instrumentality. The opening of the World's Fair in 1893 gave him an exceptional opportunity for a world wide advertisement, which even a duller mind than his would not be slow in appropriating. Through the assistance of friends who were at this time under his influence, he succeeded in opening a small and crude tabernacle near the entrance to the Fair grounds, and here he took up his work alongside of the circus features of the exposition and it was soon found that he was quite as adept as they in drawing crowds of the credulous, and making them pay dearly for their credulity. Certainly no other inference than this can be gained when we behold the contrast in his way of living now and at that time. According to his own testimony in letters from his hand which we have read, it was not many months previous to the world's fair season when he was almost a pauper, not having money enough in his pocket to pay just bills, his wife doing their own work and living in a "hand to mouth fashion," which he confesses to have been most distressing. In the few years intervening his manner of life was so completely changed that now he is the general manager of a Divine Healing Hospital, for which he pays in rent alone $25,000 a year, the head of a bank with a capital of $50,000, and with deposits unknown, the head of a land company which has lately negotiated the purchase of 6,000 acres of land on the shores of Lake Michigan, near Chicago, and the head of the International Divine Healing Association, otherwise known as the Christian Catholic Church, with representatives in every part of the globe. That this increase of power and means has brought with it infinitely greater comforts to him personally and to his family is shown by the fact that he rides to his place of business or to his pulpit in a carriage which might be taken for that of a Chicago millionaire, and when he is over-worked or ill he retires to a county seat in Michigan, which possesses all the comforts if not luxuries of the finest homes of our richest men. It might be supposed that such an immense apparent success as this must be due either to extraordinary ability or to exceptional favor of God himself, but it is safe to say that neither of these is responsible for the material success which for a while attended this eccentric, Propaganda. There are two other sources that are more largely responsible. First of all, the wide-spread credulity which looks with toleration upon every ism and freak which issues from the religious world. Second, the hostility which everywhere has met Mr. Dowie and which has taken on the color of such lively prosecution that he has been able very deftly to make it appear that he was a persecuted man. Many who had no use for him or his methods were naturally drawn into a position of sympathy for one who seemed to be doing little harm and might possibly do some good. We presume that if he had confined himself to his healing art he would have been allowed to pursue his work with comparative success, but not content with confining himself to his original plans he began to engage in schemes and operations which were so thoroughly mundane in their features and objectives that they have been the means of his losing the confidence not only of the Christian public, who looked on him with indifference if not with patience, but he

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has lost the confidence of a large part of his own people, who for the past few months have been forsaking him in great numbers, and what some people timidly feared might be the beginning of a great apostasy from the Christian church is ending in a silly fizzle. Now, however, when he has been allowed by the religious press at least to come to the end of his own tether. it is due to current history as well as to the future which will look back with curiosity upon this religious episode to give a full history of Dowie and his colossal success and more colossal failure.

And yet there are apparently intelligent people who ought to know better following this "crafty, coarse, avaricious, untruthful, malignant man." F. P. N.

DR. EDWIN KLEBS, Professor of Pathology in Rush Medical College and director of the laboratory in the Post-Graduate Medical School, has resigned, and, after a few months spent in Switzerland, will locate in Germany.

DR. C. W. LILLE has resigned the professorship of Chemistry and Toxicology in the St. Louis College of Physicians and Surgeons. He will continue a member of the faculty and secretary, but will hold a position requiring less time than is necessary to teach chemistry.

THESES ON TUBERCULOSIS.— The *Medical Mirror*, of St. Louis, offers $1000 in prizes for theses on tuberculosis in its various phases. The prizes are to be distributed as follows: $500, $200, $100, and four prizes of $50 each. The following prominent gentlemen have accepted appointment on the committee on awards: Dr. Wm. Osler, Baltimore, Md.; Dr. Geo. F. Butler, Chicago, Ill.; Dr. A. R. Kiefer, St. Louis, Mo.; Dr. C. Lester Hall, Kansas City, Mo.; Dr. H. R Hall, St. Louis, Mo.; Dr. Lewis E. Lemen, Denver, Col.; Dr. Jos. M. Mathews, Louisville, Ky.; Dr. W. W. Grant, Denver, Col.; Dr. Thos. Hunt Stucky, Louisville, Ky.; Dr. Hugo Summa, St. Louis, Mo.; Dr. Walter Wyman, Washington, D. C. Entries close October 1, 1900, and the award is made January 1, 1901.

TREATMENT OF SUMMER DIARRHEA IN CHILDREN.—Newcomet calls attention to the following points: The necessity of bathing and light clothing; the danger of overfeeding; the importance of pure and properly diluted milk, and the necessity of cleanliness of all articles used in preparing the food. Calomel is the most useful purge, as it also acts as a gastric sedative. As an astringent, he uses bismuth subnitrate; hiro or hrameria; deodorized tincture of opium; chalk mixture and peppermint water, combined and modified to suit the case. Aromatic sulphuric acid with compound syrup of rhubarb gives good results, as may also washing out the lower bowel with a solution of silver nitrate or mucilage of acacia, opium and silver nitrate.

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The Reviewer's Table.

Books, Reprints, and Instruments for this department, should be sent to the Editors, St. Louis

THIS book does not seek to be revolutionary, but yet it is new in many of its methods and features. The authors handle the subject from the view point of conditions, not theories, and well indeed have they succeeded. Simplicity in treatment is their theme throughout, and the treatment of the real fracture, not the theoretical supposition is their object. Exactness in diagnosis is emphasized, and accuracy in observation encouraged. Illustrations are lavishly introduced to elaborate the clear and precise text. Anatomy is dwelt upon fully as the correct introduction to the consideration of fractures. It would do good to the followers of the osteopathic fad who feel their researches in anatomy are supreme, to study this book and find out really how little they *do know*. But this is a digression. The chapters on the Roentgen Ray and its relation to fractures, and the one on Employment of Plaster of Paris are in themselves monographs of rare value, and alone worth the price of the book. The book, as a whole, is a rare specimen of American book-making. The printing, illustrations, paper used and binding are superb. N.

TREATMENT OF FRACTURES. By CHARLES LOCKE SCUDDER, M. D., assisted by FREDERICK J. COTTON, M.D. Price $4.50. Philadelphia: W. B. SAUNDERS. 1900.

DR. DUANE'S accurate and comprehensive scholarship has brought his "Dictionary of Medicine" to a third edition. The completeness of its revision indicates the immense advances which have taken place in the circle of sciences constituting modern medicine. He has broadened his book so that it now includes pharmacy, dentistry and veterinary science, a most useful combination, since the student or practitioner of each will inevitably have occasion to need information on all the others as well as on his own specialty. The vocabulary is of course selected, and excellent judgment has been exhibited in this difficult duty. Obsolete and useless words are ruled out and likewise such terms as are found only in dictionaries. This reduces practical terminology to such limits that it can be handled by Dr. Duane's masterly system within convenient space. He deals sufficiently with every word which the student or practitioner is likely to meet, giving its pronunciation by a simple phonetic system, its derivation, on account of the broad grasp thus conveyed, and its full definition. This last element is the crucial test of any dictionary, as it requires a master hand. Dr. Duane shows the rare power of explaining a term clearly, with neither too

A DICTIONARY OF MEDICINE AND ALLIED SCIENCES. Comprising the Pronunciation, Derivation and full Explanation of Medical, Pharmaceutical Dental and Veterinary Terms: together with much collateral descriptive matter numerous tables, etc. By ALEXANDER DUANE, M.D., Assistant Surgeon to the New York Ophthalmic and Aural Institute; Reviser of Medical Terms for Webster's International Dictionary. In one large square octavo volume of 656 pages, with 8 full-page colored plates. Cloth, $2.00, net; full flexible leather, $4.00, net. Philadelphia and New York: LEA BROTHERS & CO.

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many words nor too few. He gives encyclopedic information wherever deemed desirable. His tables condense a vast variety of information in a shape for instant reference. Practical utility has been the guiding object of the author. Thus under the principal diseases a sketch is given of their causation, symptoms and treatment; under the more important organs an outline of their structure and functions, and under each drug an account of its action, uses, preparations and dosage. The new edition contains a vast amount of fresh and additional material, space for which has been found without exceeding the limits of the previous issue. Eight colored plates have been introduced to illustrate certain subjects of importance and interest not portrayed in the ordinary text-books.

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ESSENTIALS OF MEDICAL DIAGNOSIS, arranged in the form of questions and answers. Prepared especially for Students of Medicine. By SOLOMON SOLIS-COHEN, M.D., and AUGUSTUS A. ESHNER, M.D. Illustrated; second edition, revised and enlarged. Price $1, net. Philadelphia: W. B. SAUNDERS.

THIS forms Volume XVII of Saunders' Quiz Compends, and although arranged in the form of questions and answers, it is not merely a series of definitions, but gives sufficient space to each topic to make it valuable for reference as well as for student's use. "Diagnosis must be studied from patients, not from books; even the best of books can only direct the student what to look for at the bedside, and warn him against probable errors;" and when economy of time is involved a concise, conveniently arranged book, such as this, is often of more service than the larger works. These should, however, be studied as time permits. The preparation of this, the second edition, has required much labor and research, as considerable new material has been added. The plan of omitting opinions and giving only the most prominent and prevailing view of disputed questions is commendable in a work of this character.

E. W. F.

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INTERNATIONAL CLINICS. A Quarterly of Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, etc., etc., etc. Edited by H. W. CATTELL, A.M., M.D., and others. Vol. I., Tenth Series. 1900. Philadelphia: J. B. LIPPINCOTT CO.

THE INTERNATIONAL CLINICS have an established reputation, and have been well received by the profession. To have them made even more serviceable to the general practitioner is a feature all will appreciate. This improvement which appears in Vol. I, tenth series, lies in giving more practical helpfulness to the every-day busy practitioner, both in the consideration of the diseases usually seen in practice and in adding a valuable summary of Progress of Medicine. This is not an appendix, but an embodied feature of the book, and we understand will be even better in the future. A new staff of editors have assumed charge of the Clinics. We have read the Clinics for a number of years, and find them of growing value in their practical, daily use.

F. P. N.

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HARE'S Therapeutics has reached its eighth edition in less than ten years. This is proof of the value of this very practical work. It has met favor with student, but the practitioners also approach its merits as a quick reference book. The new material in this edition has been thoroughly edited, and the cream of progress is thus carefully compiled. The physiological effects of drugs have been given especial attention, so that practical applications of the principles of therapeutics can be more readily made. The consideration of the therapy of diseases, which is a feature of the book, is invaluable; likewise the index of diseases. F. P. N.

A TEXT-BOOK OF PRACTICAL THERAPEUTICS. With Especial Reference to the Application of Remedial Measures to Disease and Their Employment upon a Rational Basis. By HOBART AMORY HARE, M. D., B. Sc. Eighth Edition, Enlarged. Thoroughly Revised, and Largely Rewritten. Illustrated with 37 Engravings and 3 Colored Plates. Price, $4.00. Philadelphia and New York: LEA BROTHERS & CO. 1900.

THIS forms one of Lea's series of pocket text-books. Although rather small to contain all that is necessary for the medical student to know of these branches, it is an excellent manual, and is fully up to the high standard set by the previous numbers of this series. The subjects are treated in a scientific manner, especial prominence not being given to those chemicals which are also drugs. An exception is made to this in the chapters on Organic Chemistry, where, on account of the vast number of the carbon compounds, the authors have chosen those which are most important from a medical standpoint. The section on Physics is rendered much clearer by the insertion of numerous illustrations. E. W. F.

CHEMISTRY AND PHYSICS. A Manual for Students and Practitioners. By WALTON MARTIN, M.D., Assistant Demonstrator of Anatomy, College of Physicians and Surgeons, New York, and WILLIAM H. ROCKWELL, Jr., M. D., Assistant Demonstrator of Anatomy, College of Physicians and Surgeons, New York. Illustrated. Philadelphia and New York: LEA BROTHERS & CO.

THE Rev. Dr. D. Z. Sheffield, President of the North China College and Mission at Tung-chau near Peking, was in America when the Boxer riots began, but immediately prepared to return to his post. Before sailing from San Francisco, late in June, he learned of the burning of his college. Dr. Sheffield left behind him the manuscript of an article which will appear in the September *Century* under the title of "The Influence of the Western World on China." As a result of the author's thirty years' experience as a missionary, he is said to argue strongly against the dismemberment of the Middle Kingdom. Equally timely will be a paper by R. Van Bergen in the same number, on "The Revolution in China and its Causes." The fiction of the September magazine will include a characteristic story of about 20,000 words by John Luther Long—"The Prince of Illusion."

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Favorite Prescriptions

Styes.—The following prescriptions are given by Ohlemann in *Ocular Therapeutics:*

Hydrargyri chloridi corrosivi..... gr. $\frac{3}{20}$
Vaselini.....dr. vii and gr. xlij
Misce et fiat in unguentum. Signa.—Ointment for eyelids.

Sulphur sublimati..... gr. xlvj
Ammonii chloridi..... gr. xv
Aquæ rosæ..... fl. oz. j. fl. dr. v.
Spiritus camphoræ..... fl dr. iss
Misce et fiat in collyrim. Signa.—For local use on eyelids.

Hydrargyri oxidi flavi..... gr. iss
Lanolin..... oz. 1⅓
Glycerini, q. s.....
Misce et fiat in unguentum. Signa.—Eye ointment.—*Ex.*

Treatment of Chronic Summer Diarrhea.—

℞ Bismuthi subgallati..... gr. xxiv-xxvi
Pulv. opii..... gr. ss
Pepsin. pulv..... gr. vi-xij
M. Trit in pulv. No. xii. S.—One every four hours, alternating with the following:

℞ Hydrarg. chlor. mitis..... gr. ss
Cerii oxalat..... gr. ij
Sacchar. alb..... q. s.
M. Trit. in pulv. No. xii. S. One every four hours,—ALFRED STENGEL, *North Carolina Medical Journal.*

Powder in Suppurative Otitis.—

Sodii biborat.....
Sodii bicarb.....aa gr. 1
Amyli..... gr. ⅓
Acaciæ..... gr. 4
Nosophen.....ad. q. s. ʒ ½
Blow some in ear after cleaning of pus.

Irritable Bladder.—The *Journal of the American Medical Association* credits the following prescription to Todd:

℞ Benzoic acid.....
Borax.....aa ʒ iv
Alcohol..... ʒ iv
Tinct. hyoscyamus..... ʒ ij
Syr. wild cherry..... ʒ ij
Elixir orange-peel..... ʒ xij
Distilled water, q. s. ad..... ʒ vj
M. Sig.: A dessertspoonful every four hours, followed by a glass of water.

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Original Department.

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Diseases of the Lungs and Pleura.

BY ALBERT ABRAMS, A. M., M. D. (Heidelberg),

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Consulting Physician for Diseases of the Chest, Mt. Zion Hospital and the French Hospital.

CHAPTER I.— COUGH.

THIS is a prominent symptom of disease of the respiratory apparatus. The chief object of the act is the expulsion of pathologic products which, if allowed to accumulate would result primarily in dyspnea to be followed by asphyxia. For this reason, the use of *narcotics* which render the respiratory mucosa anesthetic, are dangerous when the secretions are abundant. The probable direct cause of cough is irritation of the fibres of the pneumogastric nerve or its branches. A *cough center* is presumed to exist in the floor of the fourth ventricle. The mechanism of cough is briefly as follows: Following closing of the glottis and a deep inspiration, the intra-thoracic pressure by means of the auxillary muscles of expiration is augmented; then, with sudden opening of the glottis, an audible outrush of air ensues which in turn brings with it, the substances forming the sputa. Account must also be taken of the *bronchial musculature*, which surrounds the entire bronchial tree even to its ultimate ramifications. Inasmuch as this musculature is largely concerned in the genesis of phenomena associated with pulmonary neuroses, a few words concerning it will be apposite. Irritation of the vagus branches will bring these smooth muscular fibres to contraction, and after-section of the vagus in the dog, the bronchioles on that side become conspicuously relaxed. These fibres play an important rôle in coughing and expelling adventitious products resident in the bronchial tree. They confer on the bronchioles a distinct movement, such as we observe in other canals like the intestines, esoph-

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agus, etc. What has been denominated the *lung tone* is practically nothing more than the normal integrity of these muscular fibres. Under the influence of cutaneous irritation, as we will subsequently show in the study of the lung reflex, these fibres functionate as constrictor and dilator muscles. In the young in whom the use of the muscles is unknown, and for that matter, in many adults for coughing is in itself an art which must be learned, no expectorated material is brought to light. In the old or enfeebled, the musculture concerned in the expulsion of matter is deprived of its normal tone. *Pain* from any cause may suppress a cough, and for this reason, the use of narcotics may be indicated. Narcotics subserve a useful purpose in diagnosis. Assuming we have a pleuritis complicating a pneumonia in which cough is a prominent symptom. If the cough is suppressed by doses of some narcotic, let us say opium, just enough to control pain, then we are in a position to say, that the cough is probably caused by the pleuritis. When the mind is obtunded, as in brain lesions and the pyrexias, no cough is produced despite bronchial irritation, hence the tracheal mucous rattling, which has been popularly referred to as "*the death rattle*," is always an inauspicious sign. There are *different kinds of cough* from which a diagnostic inference may be drawn. The *dry cough*, unaccompanied by expectoration, is present as an initial symptom of phthisis, pleuritis, and what has been called a nervous cough. A *moist cough* is characteristic of free expectoration. We are all familiar with the *paroxysmal cough* of pertussis.

According to genesis, we may divide coughs into endo- and extra-pulmonary coughs. An endo-pulmonary cough is a reflex discharged from the respiratory tract in consequence of irritation of the vagus branches which supply this tract with sensory fibres. All parts of the bronchial mucosa are not equally sensitive to irritation, as has been repeatedly demonstrated by animal experiments. Accumulations of the mucus in the lung alveoli are incapable of exciting cough, and fail to do so until the accumulated material attains the mucosa of the communicating bronchiole. No reliance can be placed on the statement of the patient regarding the source of the expectoration. I have instituted inquiries in this direction among my phthisical patients, and the majority of them refer the source of the sputum to the upper part of the chest. This is no doubt due to the fact that the tracheal mucosa is extremely sensitive, and it is along the course of the trachea that the patient first feels the dislodged sputum. The relegation of a cough to its correct etiology is a perplexing problem. The intensity of a cough and the quantity of expectoration are usually proportionate. When this relation is disturbed we must look for an extra-pulmonary cause for the cough. Cough is an art that must be learned. Patients may be disciplined to inhibit a cough, and they may be educated to dislodge mucus by a single expulsive effort.

Dettweiler, a well-known phthisiologist, informs his patients, that to cough in public is as much a breach of etiquette as to scratch one's head when it itches. At Falkenstein where there are a hundred patients, it is rarely that one hears a cough.

To my mind no chest examination is complete without the use of the Roentgen rays; I employ them as a routine measure, as I do the low ob-

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jective on my microscope, reserving the high power for detail work. I do not complete, but initiate an examination with the Roentgen rays, and having located a suspicious lung area, the usual methods of examination are employed to interpret its significance.

It not infrequently happens in our chest examinations, where auscultation is alone of value in diagnosis, that no anomalies of the respiratory sound are heard unless special maneuvers are invoked. Natural breathing is of no value in such instances. The patient must be taught "Diagnostic breathing." The muscles of expiration must be brought into forcible action, so that expiration is intensified and prolonged. Auscultation of the lungs in different positions will, by increasing respiratory activity in definite areas, bring out certain sounds. One must not forget that in some persons, forced expiration causes a bronchospasm and develops sounds not unlike those of asthma. In such a contingency amyl nitrite inhalations are valuable. If the subject inhales the drug, we need not fear mistaking the sounds provoked by voluntary spasm of the bronchial tree. In some forms of bronchitis spasm may be an element in the dyspnea, and conversely a catarrhal factor may complicate an attack of asthma. *Nitrite of amyl* by inhalation removes the dyspnea, if occasioned by spasm, but does not influence it if dependent on bronchitis. To differentiate the rales caused by bronchitis from those of asthma, auscultate the chest after nitrite of amyl inhalation; the rales of the former persist, while the latter are dissipated. This drug, when inhaled, will bring out certain sounds which would otherwise remain unnoticed.

Extra-Pulmonary Coughs.—Such a cough must only be suspected when a systematic examination of the lungs proves negative, although we must not forget that the conventional methods in the examination of the lungs are not always crucial in negativing the presence of some anomaly. Since the advent of the Roentgen rays in clinical medicine, this fact has been most cogently demonstrated by skiascopy.

Spasm of the bronchial muscle is an undoubted element in many coughs notably in bronchial catarrh. In the latter affection I have frequently encountered a spasmodic cough, which was practically asthma without the paroxysmal characteristics, and which persisted despite the use of the conventional remedies. In such instances, *atropin* was diagnostic by its curative action. Spasmodic coughs rapidly yield to this remedy. I usually administer it in a solution—five grains to an ounce of water, one drop for a dose representing approximately $\frac{1}{100}$ grain of the sulphate of atropin. Beginning with one drop three times a day, it is gradually increased by one drop daily until the physiologic effects (dryness of the mucous membranes and persistent mydriasis) become manifest. It is a superb vagus antispasmodic, and curtails the swelling and secretions of the bronchical mucosa.

Iodide of potash is another valuable drug in diagnosis. In suspected apical lung affections, where a modified respiration is present without rales, the latter may be produced artificially by the administration of the iodide. The same agent will also intensify the auscultatory phenomena of an old pleuritis by augmenting the pleural transudate. *Bromoform* is also an aid

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in diagnosis. There are many spasmodic coughs in adults as well as children which are practically cases of pertussis, even though the characteristic whoop is absent. In such atypical instances bromoform may aid us; and while it is not a specific in pertussis, it has a decided action on the paroxysms, such as is possessed by very few drugs.

The troublesome hacking cough often present in the tuberculosis state is, as a rule, unattended by expectoration, and this deprives us of a most important means of diagnosis. In such cases I avail myself of a maneuver somewhat similar to that resorted to by genito-urinary surgeons; the latter before deciding whether a urethral secretion is free from gonococci, inject into the urethra a fluid which excites suppuration, or at any rate augments secretion. If a re-examination of the urethral secretion shows no gonococci, the danger of the subject transmitting the disease is slight. My method does not aim to excite suppuration, for if this were the object it could easily be attained by intratracheal injections. What we want is to augment and to expel the bronchial secretions. The *creosote vapor-bath*, as suggested by Chaplin (*British Medical Journal*, 1895, p. 1371), answers this purpose admirably. The effect on the patient is to induce violent cough with profuse expectoration. Even in lung tuberculosis where the tubercle bacilli are few or absent, they often appear or become augmented in number after the creosote bath.

In some instances of persistent cough where I could obtain no expectoration for examination, I could obtain such material by subjecting my patients to a pneumatic cabinet treatment. Forced inspiration of relatively compressed air produces lavage of the bronchial tubes. There is no organ nor region of the body, which has not been held responsible for an extra pulmonary cough.

THE SKIN.—I have frequently demonstrated the influence of cutaneous irritation on the lungs (*Medical Record*, April 23, 1899; *Medical News*, January 7, 1899). There are susceptible individuals who upon the slightest exposure to a draft will cough. The cough is not provoked, as many suppose, by the inhalation of cold air, for susceptible persons cough even after immersion of the hands or feet in cold water. Although accustomed for years to a morning cold bath, yet every time I enter the bath I suffer from an attack of coughing. I have tested a number of persons to determine whether particular regions on the surface of the body were sufficiently susceptible to an irritant to cause cough; in a few instances only was I able to mark out any such regions, which for convenience I have designated as *tussogenic zones* (*Medicine*, August, 1899). As an irritant, a current of cold air from an air-pump was directed on different parts of the body. Tussogenic zones were most frequently found on the anterior surface of the neck in the course of the distribution of the pneumogastric. All those in whom the zones were found stated that upon exposure to a draft cough followed. The maneuver just suggested may be applied in the diagnosis of cutaneous coughs.

THE EAR.—For a long time it has been known that irritation of the external auditory meatus, through the auriculo temporal branch of the fifth

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nerve, would excite coughing. The introduction of the aural speculum will not infrequently excite this reflex. According to Fox, more than 17 per cent of individuals cough after irritation of the external meatus. As a rule, in ear cough, an examination shows the presence of a foreign body, and the cessation of cough after its removal confirms the diagnosis.

THE NOSE.—Irritation of the trigeminal branches in the nose is often a cause of cough. The cough areas in the nose are situated about the anterior and posterior ends of the inferior turbinated bodies and that part of the septum lying opposite the latter. The application of the sound to the abnormal or even normal mucosa, in an indefinite percentage of persons, causes cough. The correction of a hypertrophic rhinitis, the removal of polypi, and other anomalies, often cures a troublesome, persistent cough. A thorough rhinoscopic examination will, as a rule, establish the diagnosis of nasal cough, yet we must not be led astray by every anomaly of the nose. Deviations of the septum, for instance, are estimated to be present in 90 per cent of all adults. *Cocaine* and the *sound* must be employed as accessory agents in diagnosis, if the nose be suspected. Employ a moderately strong solution of cocaine, first in one nostril and then in the other, and note if the cough is in any way influenced. Having attained positive or negative results, our next object is to employ the probe, eliciting, if possible, the cough areas. Having found one or more cough areas, each is cocainized in turn and again probed; if no reaction follows, there is presumptive evidence of a nasal cough.

NASOPHARYNX.—From this region coughs are less frequently produced. The usual causes are adenoids and the discharge in nasopharyngeal catarrh. In children a cough dependent on adenoids is comparatively common. The cough is worse in damp than in dry weather. The "*morning cough*," in which large quantities of sputum are brought up, is frequently a symptom of nasopharyngeal catarrh. It has not infrequently happened that I was unable to say positively whether the sputum arose from the nasopharynx or deeper down in the respiratory tract. Such a question appears a priori to be superfluous, yet if one has presumably cured a bronchitis, but cough and expectoration still remain, one is often at a loss to say whether the nasopharyngeal catarrh is responsible for it. This question could be decided by treatment of the catarrh, but a diagnosis thus established is a tedious matter. Repeated microscopic examinations show that a diagnosis may be arrived at more easily; not that there are any characteristic microscopic constituents in the sputum from the nasopharynx, as one would be led theoretically to believe, but because the general characteristics of the sputum correspond with the secretion from the nasopharynx. To illustrate: A patent presents himself for the relief of a chronic cough; an inspection of the nasopharynx shows secretion; some is removed, and the elements under the microscope are noted. If the sputum is subsequently brought to us by the patient, this is similarly examined, and if the microscopic elements correspond with those from the nasopharynx at a previous examination, we are justified in concluding that the expectoration is largely of nasopharyngeal origin.

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THE PHARYNX.—Acute and chronic diseases of the mucous membrane of this region may give rise to cough. A follicular pharyngitis especially excites a cough. Along the lateral walls of the pharynx we find a chain of lymphoid tissue. This may be involved in an inflammation known as *pharyngitis lateralis hypertrophica*, and not uncommonly excites cough. This mass of lymphoid tissue, being partially hidden by the pillars of the fauces, often escapes attention, unless with a retractor the palatine arch is drawn forward. Here, again, the probe and a solution of cocaine aid us in diagnosis.

THE TONSILS.—Hypertrophy of the tonsils, as well as the presence of cheesy matter or concretions in the crypts, sometimes causes an irritating chronic cough. Adhesions of the tonsils to the pharyngeal pillars have been known to be responsible for a cough.

UVULA.—In my experience an elongated uvula is the most frequent cause of extra-pulmonary coughs. Inspection shows the uvula of such length that it may touch the tongue, or in the recumbent position its end may touch the epiglottis, or even reach the entrance of the larynx. Persons who suffer from an elongated uvula complain of a foreign substance in the throat, and they have a constant desire to swallow, as if to rid the throat of some extraneous body. The cough from an elongated uvula is not infrequently associated with nausea and vomiting, the latter symptoms arising from contact of the uvula with the back of the tongue. Laryngospastic symptoms may develop at night, for it is at this time, when the patient assumes a recumbent position, that the couch is most pronounced. The patient soon learns intuitively that the violent paroxysms of coughing may be inhibited by sitting up in bed, or leaning forward. A moderate amount of expectoration is nearly always present, owing to the associated pharyngeal catarrh. Inspection of the throat often shows no real elongation, because some patients involuntarily contract the palate and uvula; therefore they must be taught to relax the parts. The application of cocaine aids in diagnosis. Limiting the application of the cocaine to the the uvula alone is of little value; it must be applied to the adjacent structures, from which the reflex act is started. Amputation of the uvula is the only cure; if followed by a cessation of cough the diagonsis is made.

LINGUAL TONSIL.—Found as an enlargement at the base of the tongue, either in the center as one mass, or on either side of the median line in two or more parts. It is a mass of lymphoid tissue, corresponding in structure to the faucial and third tonsil. When the lingual tonsil hypertrophies, the chief reflex symptom is cough. As a rule, the cough is accompanied by little or no expectoration. Like the cough of an elongated uvula, it is worse when the patient lies down. There is a sensation of a foreign body in the throat which does not disappear on swallowing. The cause of hypertrophy is similar to that of the other tonsils, and the affection preponderates in women. Diagnosis is made with the laryngoscope. The tonsil is found to be red and swollen. We find it partially or completely filling the glossoepiglottic fossa, and sometimes encroaching beyond the free border of the epiglottis. If the lingual tonsil is suspected we may employ cocaine locally.

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The reflex act of coughing may be discharged from the *teeth*, *esophagus*, *liver*, *spleen* and *pleura*. Recently I had under observation a hysterical woman with complete anesthesia of the fauces, who suffered from esophagisms. This was a suggestive case for studying the esophageal cough. Upon introduction of the esophageal sound, cough was invariably produced, yet when the esophagus at its beginning was cocainized, no cough followed the introduction of the sound. Palpation of an *enlarged liver* or *spleen* is occasionally followed by cough, which can no doubt be referred to the peritoneal covering of those organs innervated by branches of the vagus. Nor must we deny the role played by the pleura in the production of coughing. The individuals suffering from *acute pleuritis* will cough with the slightest pressure of the stethoscope over the affected area. The same phenomena can not infrequently be evoked in normal persons. It has often been my experience in cases of acute pleuritis, where opiates were of little avail in controlling a persistent cough, to find that strapping the affected side would give almost instant relief to the troublesome cough. The so-called *stomach cough*, while not supported by the experiments of Kohts, is largely corroborated by clinicians. Some attribute the stomach cough to a pharyngitis complicating the stomach affection, whereas others contend that the eructated gases reaching the larynx induce coughing. What deserves recognition, however, is the fact that many persistent coughs subside when treatment is directed toward the gastric disease. Gynecologists recognize a cough which is discharged from the uterus and contiguous structures. Local treatment, especially by pessaries, act quickly when retroversion, prolapse, etc., are complications. *Hysteria* has a distinctive cough, which is loud and barking, and gives the impression of being produced with the object of attracting attention. Associated with the hysterical aphonia and other stigmata of hysteria is readily recognized. Attention has been directed to a *nervous cough*, independent of hysteria. Such a cough naturally follows a catarrh of the larynx or pharynx, and persists after the original trouble is cured. It is difficult to explain the nervous cough, otherwise than by supposing that the reflex circuit remains in a condition of increased irritability.

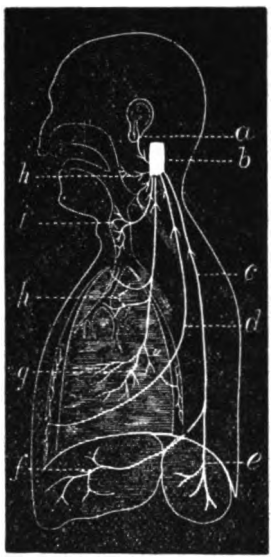

FIG. 1.—Diagram of the afferent nerves which when irritated stimulate the respiratory centres (b) and produce coughing. The nerves are distributed—*a*, to the ext. auditory meatus; upper *b*, to the pharynx; *i*, to the larynx: lower *b*, to the bronchi; *g*, to the lung; *d*, to the pleura; *f*, to the liver; *c*, to the spleen and esophagus. (Brunton.)

The diagnosis nervous cough is frequently an admission of ignorance, but more often it is an error in diagnosis. I can recall many cases of incipient pulmonary tuberculosis, in which the cough was referred to as nerv-

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ous. With our advanced methods of diagnosis, the nervous cough will soon be relegated to oblivion. I recall a patient who suffered from a chronic cough. She ran the gamut of specialists with diagnosis, ranging from tuberculosis to neurosis. Her uvula was amputated, her nasal mucosa cauterized and the turbinates removed; a stomach specialist washed her stomach, and a gynecologist curetted her uterus, yet the cough persisted. At last, a throat specialist, discovered a granular pharyngitis, and with a probe noted, that coughing could be provoked by touching the granules. The latter were cauterized resulting in a permanent cure. It is undoubtedly true, that mistakes in diagnosis are less often due to errors in misinterpretation than to an incomplete examination of our patients. Sir William Savory tritely remarks, "Consciousness of one's ignorance may do much to avert the errors of carelessness, and he who has confidence in his own judgment should of all men be most careful in inquiry."

THE LARYNX.—A cough dependent on laryngitis readily yields to the treatment of the underlying cause. Spraying the larynx with a cocaine solution will temporarily inhibit the cough. A tablet of cocaine (gr. $\frac{1}{20}$) placed on the back of the tongue is also serviceable. Laryngeal insufflations of orthoform give more permanent results. If we freeze the skin with a spray of rhigolin or methyl chloride over points on either side of the neck corresponding to the entrance into the larynx of the superior laryngeal nerves and repeat the maneuver daily, we are able to reduce laryngeal coughs to a minimum. The same method favorably influences laryngeal spasms, and will frequently cure aphonia after a single application. In many phthisical individuals cough is frequently provoked by the ingestion of food. Normally in every act of deglutition, the epiglottis completely closes the larynx. If there is tuberculous infiltration of the epiglottis, the borders of the latter become indurated and irregular, resulting in incomplete closure of the larynx, so that fluid or food enters the latter and induces coughing. *Aneurism of the thoracic aorta* may produce a paroxysmal cough by pressure upon the trachea, or bronchus, or by pressure upon the recurrent laryngeal nerves. The character of the cough in the latter instance is of a barren ringing character.

In *heart disease*, the cough may be varied in origin. Sansom found a cough present in 45 per cent of his cases of valvular heart disease. Pressure upon the bronchus or pneumogastric nerves is responsible for the cough in pericardial effusion, whereas in failing compensation, a low grade bronchitis develops in consequence of passive congestion of the lungs. In the latter case, *digitalis*, or some heart excitant like *caffein*, by relieving the circulatory embarrassment will frequently inhibit the cough. *Tubercular enlargement of the bronchial glands* frequently produces a spasmodic cough, suggestive of pertussis. The diagnosis of this condition may sometimes be made by the sign of Smith and Hare, viz., by directing the patient to throw the head well back, and placing the stethoscope below the suprasternal notch, a *purring sound* will in most cases be heard during respiration. This sound is supposed to be due to the pressure of the glands upon the venous trunks. A method, which to me is of more significance in the

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recognition of enlarged infratracheal and bronchial glands, is that of Ewart. According to the latter the fifth dorsal spine is invariably dull. This dullness extends for a short distance on either side of the middle line, but more to the right than to the left. If the shape and size of this square patch of dullness be much modified, one may suspect enlargement of the glands in question.

We speak of a *winter cough* in individuals with chronic bronchitis whose cough appears with the cold weather and lasts until the following summer. A chronic cough confined to the early morning hours, with much expectoration may be caused by tuberculosis with cavitation, pulmonary abscess, empyema in communication with a bronchus or bronchiectasis. Cough induced by change in the position of the patient arises on account of alteration in the position of a pleural exudate, or by establishing more direct communication with a lung cavity. A cough arising when the patient first enters his bed is often a *skin cough* caused by the cold sheets.

THE Sultan of Turkey has turned philanthropist, and has inaugurated an Indian Famine Relief Fund, starting it with his own donation of £500.

ACCORDING to the *Australasian Medical Journal*, there are 902 registered medical practitioners in New South Wales, or about one practitioner to 1536 people.

M. OSIRIS, a wealthy Parisian, has presented to the Institute of France a sum representing an annual income of about 53,000 francs for a triennial prize of 100,000 francs for the most remarkable work or discovery of general interest, especially in the domain of medicine and surgery. The prize is open to general competition in all countries.—*Medical Times.*

NOCTURNAL EMISSIONS.—Gould & Pyle thus sum up the treatment of nocturnal emissions: "Too frequent emissions reduce the strength, make the patient irritable and weak, and gradually prey upon the mind. Nocturnal emissions occurring in normal males who are continent and chaste are not to be interfered with unless excessive. Unchaste literature and lascivious thoughts are to be avoided. A hard mattress and light coverings are advisable. Avoid sleeping on the back. Tie a spool on the loins, so that if the sleeper roll upon the back he will be awakened by the pressure. Potassium bromid, 20 grains; or the same amount of chloral may be taken on retiring. Cold sponging of the perineum and loins night and morning has been of great benefit. Potass. citrate, 20 grains in water, three times a day, will render the urine unirritating and alkalin, and allay a provocative cause of emissions. Arsenic alone, or in combination with strychnin, is often of service when given in full dose. Stimulating foods and drinks are to be avoided.

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The Case of John—Mongolian Type.

BY FANNY KING,

ORANGE, N. J.

TEN years ago last December John entered the Seguin School as a day pupil. He was then six years old, tiny for his age, and was most unprepossessing because of his rough skin, inflamed eyelids, open mouth, and constant drooling. He could not talk, and comprehended very little. He remained in the school but five months, and as during that time he had been brought each day for but one hour's work, very little had been accomplished.

After leaving, nothing was heard from him until last September, when his parents again wished to place him in the school. His age debarred him from entrance, but his mother's entreaties finally over-ruled all objections.

A year ago last winter he went each day to a parochial school (he is a Roman Catholic), but although the Sisters had worked patiently and faithfully with him, they had failed to interest or advance him. Previous to this he had gone for a time to a kindergarten. His parents did not feel that he had gained there, but the training had undoubtedly benefited him, for he uses his hands well.

Upon examination last September it was found that he comprehended any language which one would think of addressing to him, and could make himself understood, though he used very few words, and these came out with great difficulty, because of his faulty articulation and stammering. He could not give the sounds of th, ch, sh, j and z; left off all final consonants, and did not give s in combinations of st, sp, sl, etc. His mouth was still open, but the drooling had ceased. Although entirely untrained and without the least knowledge of the first principles of reading, writing and number, yet he had gained considerable practical knowledge from playing with other boys at home, and was fairly well able to take care of himself and his possessions. He could dress himself, but would not willingly bathe—would not even wash his face and hands—and protested against its being done for him. When told that it was time to use a tooth-brush, he had a way of saying, "O, never mind," which was so conclusive that it often admitted of no argument. Now, at the end of nine months, he is given a shower bath every morning to his great delight, and he never omits brushing his teeth night and morning.

Physically he was strong, with well developed muscles, but was short and round shouldered. When he had been in school a month, he was examined by an orthopedic physician, and the following diagnosis was given: "Heart, normal. Lungs, normal. Malformed chest. Scoliosis. Some rotation to right. Distance between scapulæ uneven. Strength of hands: right hand, 47 lbs; left hand 45 lbs. Partial flat-foot—use instep supporters. Give abdominal work. Widen and deepen chest. Work to point of perspiration, if possible."

John detested the instep supporters, and would not wear them unless watched. He also disliked a pair of new shoes which were bought for him

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soon after he came, and which he wore alternately with an old pair. They fitted well, but he objected to the stiffness, and often threatened to "put 'em in 's-s-spress package an' s-s-sen' 'em home, C. O. D., an' get c-c-c-crutches." One night his old pair had been put outside his door to be blackened, and his new pair had been gotten out, ready for use in the morning. Two hours later John was found fast asleep, with his old shoes safely hidden under the bedclothes. He had quietly gotten out of bed and secured them, hoping thus to insure comfort for the morrow.

We found him to be very mischievous and destructive, with a mania for collecting screws, bolts, nails, keys, etc. At Christmas he was given a watch, and at the end of a week there was nothing left but the case. He had taken it entirely apart. He has a bicycle and can ride well, but as a result of his destructiveness, it is in the repair-shop more than half the time.

He requires but a few moments for an act of mischief, and although closely watched, occasionally finds an opportunity for wrong-doing. Once he turned off the water which supplied the boiler of one of our steam heaters, and it was discovered just in time to prevent an accident. Another time the water was suddenly shut off from the house, except on the street floor, and we were unable to discover the cause. As it was a legal holiday we could not get a plumber until the following morning, when it was found that there was nothing wrong with the pipes, but that some one had deliberately turned off the water. Only John could have done this. We did not dare correct him for fear of so impressing the occurrence upon his mind that he would be tempted to do these things more frequently. All we could do was to watch him even more closely than before.

The following order of exercises was made out for John the day after he enter school, and we began work:

9.00 A. M.—Kindergarten songs and games.
9.20 —Corrective gymnastics.
9.40 —Wood-work.
10.00 —Number.
10.20 —Music lesson.
10.40 —Basket-making.
11.00 —Reading.
11.20 —Writing.
11.40 —Calisthenics.
1.00 P. M.—Number.
1.20 —Clay modeling or drawing.
1.40 —Articulation and language.
2.00 —Writing.
2.20 —Educational gymnastics.
2.40 —Dancing.

He worked with eight different teachers in as many different rooms, but even this variety was not sufficient to interest him. Great patience and tact were required on the part of the teachers. At times all efforts failed, and John would remain sullen and moody for hours—silent, except for an occasional oath. He resented the confinement, and seized every op-

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portunity to run out of doors. Frequently he would lock himself in a room, and would then examine the contents of the bureau drawers and closets, appropriating for his own use anything which pleased his fancy.

Gradually he became interested in his school work, but nearly three months had passed before he *willingly* went from one teacher to another without trying to escape. Now he is eager to work, enthusiastic, ambitious, and, as a rule, painstaking. His disposition has become almost sunny, and the whole expression of his face has changed. In time this newly-developed trait of cheerfulness will so grow upon him as to become characteristic, but as yet it is not more than well ingrafted into his nature, and its growth will depend upon his environment. If we failed to keep him happy and to make his work interesting, he would undoubtedly fall back into his former morose condition within a month. He still has occasional outbursts of temper, and needs judicious management. We recognize the fact that we are working with explosive material, and are most careful not to antagonize him.

On October 3, four weeks after entering school, John was weighed, and his measurements were taken. He was again weighed and measured on May 15, 1900. The following reports were given:

	October 3, 1899	May 15, 1900
Weight	95 pounds	99½ pounds
Height—standing	56¼ inches	56⅞ inches
Height—sitting	31½ inches	31⅞ inches
HEAD MEASUREMENT.		
Circumference—		
Taken above ears and over occipital tuberosity	504 millimeters	506 millimeters
Transverse—		
(*a*) Tape measure from ear to ear over vertex	333	335
(*b*) Calliper measure from ear to ear over vertex	110	110
Longitudinal—		
(*c*) Tape measure from nasal notch to occiptal tuberosity	310	313
(*d*) Calliper measure from nasal notch to occipital tuberosity	160	165
GIRTH.		
Neck	328	335
Chest—in repose	777	805
Chest—full	808	820
Chest—empty	747	765
Ninth rib—in repose	703	720
Ninth rib—full	720	750
Waist	656	660
Hips	789	798

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	October 3, 1899		May 15, 1900	
	Right.	Left.	Right.	Left.
Thigh	487 mm.	485 mm.	496 mm.	495 mm.
Knee	310	310	318	318
Calf	316	316	335	333
Ankle	206	206	210	210
Instep	220	218	226	226
Upper arm	225	224	238	236
Forearm	228	227	230	229
Wrist	145	145	149	146
Hand	184	183	180	179
LENGTH.				
Leg—ant. sup. spine to inter. malleolus	740	735	787	740
CAPACITY.				
Lungs	120 cubic inches		152 cubic inches	
BREADTH.				
Neck	110 mm.		105 mm.	
Shoulders	333		335	
Chest	240		245	
Waist	220		220	
Hips	270		265	
DEPTH.				
Chest	170		175	
Abdomen	170		172	

On comparing the above reports, it will be seen that there has been considerable physical gain. John is fond of his gymnastic work, and enters into it with spirit, quite frequently practicing the exercises by himself out of school hours.

John's mother was anxious that he should have music lessons, but he disliked the drudgery, and during the first three weeks was unwilling to spend more than five minutes a day at the piano. After a month's trial the lessons were given up for a time. He then pleaded for an accordion, so one was bought for him. He was delighted with it, and worked diligently until he was able to play a few measures of "Home, Sweet Home," his favorite song. We then proposed that he learn to play this on the piano. The proposition met with his approval, and since then he has not rebelled against the daily lesson. He has learned a number of five-finger exercises and a few simple duets, chief of which is "Home, Sweet Home." He will never learn to play by note, but the slight knowledge already gained is even now a great pleasure to him. He spends many odd minutes at the piano, which a few months ago would have been given up to mischief.

John had been taught nearly all of the letters before he came to us, but he did not know any printed words. We found that when a short word was spelled for him, he could usually pronounce it, but he himself could not name the letters quickly enough to catch the combination of sounds. We began to teach him by the word method, and the result has

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been satisfactory. He has mastered several primers, and now has a first reader. His defective articulation has been entirely corrected, but he still stammers.

He did not know any script letters, and could not copy any one of them. He now knows and can copy every letter, and he has learned to write ten from dictation.

Last September John knew nothing of color. In four months he had learned the primary and secondary colors, through work with colored pencils, and we substituted for this the J. Liberty Sadd system of drawing, alternating with clay modeling. He was not interested in the drawing and has made little progress with it, but he liked the modeling, and although he had absolutely no idea of form, was glad to experiment with the clay. Now, at the end of five months, he can make many simple forms.

John takes pride in his wood-work, and uses the chisel, brace and bit, and plane with little help. He saws vigorously, but although lines are ruled for him, is not yet able to keep the saw straight, inclining it much to the left.

He has learned to make baskets of rattan, having help only in starting and shaping them.

We have taught him to dance the Virginia reel, lancers, the two-step, and the polka, and this accomplishment affords him the keenest pleasure.

The following reports given by the number teacher, show his progress in that work:

SEPTEMBER 29, 1899.

Arabics.—Knows names of all digits, but has little idea of their values above 3. Writes them fairly well, but cannot count accurately above 4.

Coins.—Has some idea of the value of the three small coins.

Much practice has been given in counting a variety of objects. Has difficulty in answering such questions as "How many hands have you?" "How many feet has a cat?" etc.

John would answer these questions without giving the least thought. Once when asked, "How many legs has a dog?" he answered, "Three." "Why, John," said the teacher, "how could a dog walk with only three legs?" "Walk *lame!*" was the immediate reply.

One day after he had become interested in his number work, we overheard him drilling himself in his room at the close of school. "Now, count shoes," he said, "one shoe—two shoes—hm-m—good boy!" (the last in exact imitation of his teacher's tone and expression). "Now, count chairs—hm-m—one chair—two chairs—three chairs. Good boy—*very* good boy!" This was kept up for a half hour, when we thought it better to interrupt the drill and send him out of doors. His second number report is as follows:

NOVEMBER 29, 1899.

Arabics.—Has daily practice in writing and counting to 8, aiming to teach relative positions and values.

Coins.—Has practice in buying small articles, the cost of which does not exceed five cents.

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Addition.—Some concrete work with coins has been given. Has made a beginning with written abstract addition.

FEBRUARY 28, 1900.

Arabics.—Reads and writes to 10.

Roman Notation.—Reads and writes to IV.

Coins.—Buys small articles, paying for same when value does not exceed 10 cents.

Addition.—Has written work with aid of objects.

MAY 15, 1900.

Arabics.—Reads and writes to 16. Has a fair idea of the relative positions of the digits, and can illustrate their values with coins, balls, or other objects.

Roman Notation.—Writes to VI from memory, and reads to VII from dial.

Ordinals.—Has had practice to 15th on calendar.

Coins.—Counts and arranges, in simplest combinations, to 15 cents inclusive.

Addition.—Has memorized six of the easier combinations, and does written and oral work in all the combinations, the sums of which do not exceed 6. The written work consists mainly in obtaining answers to written combinations by arranging objects to illustrate same, and in writing combinations from objects arranged by teacher. Has had much practice in buying small articles when cost does not exceed 15 cents.

Now that a foundation has been laid, the work of further developing the aroused faculties will not be difficult. John's life is far happier than it was nine months ago. His time is fully and pleasantly occupied, and the hopeless, sullen expression which came from a dull sense of his utter useless to himself as well as to others, has changed to one of happiness and animation. He has begun to realize that it is in his power to please those about him through doing to the best of his limited ability the work which is given him.

It seems almost criminal that a boy, who in nine months is capable of such improvement under proper conditions, should have been deprived of training for so long a time. For ten years his parents had known that there were schools for the training of children of arrested mental development, yet they were so selfishly fond of him, that they were unwilling to bear the separation, consequently upon sending him from home. They did him a wrong, the enormity of which they are just beginning to realize.

Parents who are ignorant of the existence of such schools may be forgiven, but what shall be said of those who, through mere sentiment, fail to give their children the training which would make them less a burden upon the community?

DR. F. SAVARY PEARCE has been elected Clinical Professor of Diseases of the Nervous System in the Medico-Chirurgical College of Philadelphia, succeeding Dr. C. W. Burr, resigned.

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PNEUMONIA.

BY FRANK PARSONS NORBURY, M. D.

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AND EGBERT W. FELL, B. S..

JACKSONVILLE, ILL.

Current Thoughts on the Etiology and Treatment of Pneumonia.—(*Cleve. Jour. of Med.*, April, 1900.)—In this paper Brannon presents nothing original, merely quoting the opinions of various authorities. By some it is regarded as an inflammation which may be produced not only by the action of the pneumococcus, but by other micro-organisms as well; by others it is thought that the absorption of the toxin of the pneumococcus only can produce the disease, and that the local process is merely secondary. There has been no set treatment up to the present time, but the outlook for a specific serum is good.

Treatment of Pneumonia in Children.—(Goltman, *Med. Council*, April, 1900.)—Good nursing is the chief point. The diet should be of milk, broths and egg albumen. The author does not approve of counter-irritants; opium should be avoided. Stimulating expectorants may be given during the whole course of the disease, but are especially useful when the cough becomes distressing and there is dyspnea and the rattle of mucous in the tubes. For threatened failure of heart and respiration alternate douches of hot and cold water are beneficial. The cold pack night and morning should be used to reduce temperature.

Pneumonia, Its Complications and Sequelæ.—(Editorial in *Chicago Clinic*, April, 1900.)—Pneumonia is an acute infectious, slightly contagious disease caused by the diplococcus pneumoniæ, a diminished resistance being necessary for infection. It is most common in the temperate zone, during winter and spring. A well-defined chill marks the onset, and in from a few hours to two or three days consolidation has taken place. Death may occur as early as the first or second day. There is no specific or routine treatment, each case must be treated on its merits Good nursing and care are important. An exclusive diet of hot milk is recommended. As death usually results from heart failure strychnia should be given freely through the crisis. Digitalis is less reliable; whiskey is useful. Morphia, if necessary, should be used sparingly. In case of cyanosis oxygen should be used. Cough syrups are useless, and the coal-tar antipyretics harmful. Excessive temperature is best reduced by the cold sponge bath. Instead of normal resolution taking place the lung may remain solid and assume a fibrous character. The chest wall becomes retracted, the shoulder depressed, the spinal column curved, and compensatory emphysema may develop in the unaffected lung. Tuberculosis frequently supervenes. Iodide of potassium may be of benefit; exercise in the open air is indicated. Abscesses occur in 2 or 3 per cent of cases of pneumonia. Convalescence is tedious, but recovery usually results. Exercise and fresh air, nourishing food and a tonic treatment should be given. In case tuberculosis follows pneumonia it was the pre-existing disease, the acute process serving to lower the vitality and hasten the growth of the tubercle bacilli.

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Society Proceedings.

BRAINARD DISTRICT MEDICAL SOCIETY.

Society met at the Hotel Smoot in Petersburg, Ills., July 26. Vice-President Hurst occupied the chair. Those present during the sessions were Drs. Black, Cargill, Coppel, Eldridge, Holmes, Hurst, Kreider, Munson, Miller, J. W. Newcomer, Irving Newcomer, Ryan, Stone, Walker, Whitley and Rothert

Routine business was transacted. Drs. Cargill and Newcomer were appointed to fill vacancies on the Board of Censors. Dr. John Earle Meloy of Lincoln, graduate of College of Physicians and Surgeons, Chicago, class of 1900, was recommended for membership by Drs. Lowrie and Brown; Dr. Herman Rothert of Petersburg, graduate of Miami Medical College of Cincinnati, class of '97, was recommended by Drs. J. W. and I. Newcomer. Both applications were duly referred and after favorable report both gentlemen were elected to membership.

DR. BLACK spoke of the need and advantages of thorough organization among the profession and gave the experience and methods of the New York physicians in their recent re-organization as an illustration. He then moved the appointment of a Committee of Three on the Good of the Profession. Carried. It was moved and carried that Dr. Hurst be chairman of this committee with power to select his associates.

For the Committee on Microscopy, Dr. Black reported the recent organization of the Section on Microscopy, Pathology and Bacteriology in the American Medical Association together with a brief account of the large and very interesting exhibit of specimens. The clinical value of the use of the microscope was discussed briefly by Drs. Holmes, I. Newcomer, Walker and others.

In the absence of the essayist the session was opened to general discussion and Dr. I. Newcomer spoke of the use of silver nit. in the eyes of the new-born, relating an instance where through neglect to report the case to him irreparable damage had been done, which he felt might have been prevented had he used the solution in the eyes at birth, with other cases where the remedy had been successful in arresting disease.

DR. HURST said that Dr. W. T. Montgomery uses a solution of 1 dram to the ounce. The weaker solutions cannot have very much effect in serious cases.

DR. COPPEL rarely sees these cases. The routine use of these solutions in the eyes of the new-born does not seem to me to be needed or advisable. There would be verv little serious trouble if the doctor were promptly notified of the first symptoms; but, it is true, that among some classes of people it is difficult to convince them of the need of active attention to these cases at the first onset of disease.

DR. BLACK.—Appendicitis is a subject commanding wide attention at this time. The diagnosis of inflammatory intra-abdominal lesions is of the greatest importance. Some physicians still claim to have seen cases of appendicitis seldom or never. The diagnosis must be doubted in such cases. It is true that the knowledge of the proper methods of diagnosis is

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new and all statistics of more than a few years back are utterly unreliable. Last year the Surgical Section of the American Medical Association spent a whole day discussing this topic. This year it occupied the Medical Section as well as the Surgical Section half a day. Great difference of opinion exists. To find out the facts is the great need. In a paper read before the Morgan County Society the records of the county had been presented. They show a terrible mortality rate from this disease, and from our present knowledge of the subject it is apparent that many cases reported under other names were really appendicitis. The mortality rate would be greatly improved by prompt and accurate diagnosis. At present, operators have no chance. They do not see the cases till the best time for operation has passed, often not till all hope of success is gone. Except in a very few cases there is a good prospect for success from operation any time during the first twenty-four hours. After forty-eight hours no one can say what may be the outcome. A girl had appendicitis. After forty-eight hours the symptoms improved and operation was omitted. For five years she remained well. She took a ride one day and while in the country was attacked with severe abdominal pain. In the evening a remedy for pain was used. Early in the morning a physician was called and found a hopeless case of general peritonitis with no chance for a successful operation. Perforation had occurred at the onset of the attack. Ochsner's method of rectal nourishment and hypodermic medication was tried, with elevation of the head and shoulders as advised by Fowler. For twenty-four hours she seemed to improve. Henrotin was called and urged immediate operation, which was done, and in ten hours the girl was dead. The lesson is, operate in the primary attack.

Of 261 deaths from intra-abdominal lesions reported in Morgan County during twenty years only thirteen are called appendicitis. Doubtless at least half the cases were really appendicitis. Senn says at least 85 per cent will recover under any treatment. If this be so we have had 2000 cases of this disease in that county during the period named, or 100 per year. Fifteen per cent ought to be reduced to 5 per cent.

Cases of repeated painful "bilious attacks" should be regarded with suspicion. A young man after a day's ordinary labor was attacked with pain at night. Within twenty-four hours an operation was performed, pus was found in a limited cavity. He recovered. He had been "subject to bilious attacks." Deaver says that he cannot tell whether a case will progress for better or for worse, hence he urges prompt operation, and is rewarded by a mortality of only 1 per cent in a long series of cases.

Noon having arrived the society adjourned for dinner.

After dinner, on reconvening, DR. KREIDER described (a) a dressing for fractured clavicle. Rings of cotton covered with muslin are made large enough to easily encircle the arm at the shoulder and wrist, and to lie loosely around the flexed elbow. Through these adhesive straps are passed, drawing the first backward, the second upward and through both sides of the elbow ring so as to support both above and below the joint, and hence drawn over the fracture to the top of the shoulder making pressure. The result is that the member is firmly held as in the Sayre dressing, but without the discomforts of that manner of bandaging. (b) A

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soldier was struck in play by a comrade by a bayonet just above the pubis. He at once desired to go to stool. As he was given to magnifying small ailments his complaints were to some extent ignored, but he was taken to the camp hospital and at 4 p. m. was sent to St. John's Hospital. He was vomiting. His nose and extremities were cold, but there was no serious symptom. An exploration showed that the bladder was perforated at the upper part below the peritoneum. The best method is to empty the bladder by catheter and fill it with about six ounces of sterilized milk. A very slight oozing of milk is visible at once. This method was used, followed by incision through the pre-vesical space and the puncture was closed. The symptoms continued unmodified, and on the second day the abdomen was opened above the bladder. A second puncture was found close to the perineum, nearly entering the rectum. As it could not be reached from above for suture and the peritoneum was already inflamed a long dressing forceps was passed down, and the perineum was incised on this. Drainage was put in and the patient is doing well at present. The microscope showed blood cells in urine, though not enough to be otherwise discovered.

CASE 2.—Mr. J. when intoxicated had an alteration with a hack-driver who threw his hitching weight at him, striking him just above the pubis. Dr. Ryan was called, found the urine bloody and advised operation, which was refused. The post mortem showed the injury could easily have been repaired.

CASE 3.—A young negro was shot with a pistol near the pubis. The ball grazed the bladder and lodged in the perineum. Under treatment he made a perfect recovery.

CASE 4.—A man was shot with a Winchester from the rear at close range. The bladder was torn to pieces by the ball and fragments of the sacrum. Death followed.

Discussion.—DR. BLACK.—The first case shows the value of pelvis drainage.

DR. HURST had a case of fracture of the clavicle in a very fleshy man a number of years ago. There seemed to be no *good* place to apply adhesive straps; so rings were made, as suggested by Dr. Kreider, and applied about both arms at the shoulders. They were joined by bandage at a proper distance in front and then brought well back across the shoulders. At first it seemed all right, but I presently found the fragments were over-riding each other and was obliged to use the ordinary dressing. The method suggested seems to meet the indications well.

DR. WHITLEY.—These cases of bladder injury suggest a case which may be a warning. An elderly man had a gonorrheal stricture of many years standing. There was constant dribbling of urine which had not passed naturally for 12 or 14 years. After long effort I succeeded in passing a filiform bougie. When it had been retained 24 hours a little larger one was passed; on the third day a small catheter was introduced; on the fourth a larger one with increase of the discharge. The bladder nearly filled the abdomen. A quart of urine was drawn. As it flowed steadily it was allowed to flow until four quarts had passed. Next day he had high fever, and on the following day he died from acute nephritis. This

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might have been avoided if only a small amount of urine had been drawn at a time and time given for the abbominal circulation to become normal.

DR. RYAN.—In an old gentlemen where every effort failed to enter the bladder by the natural passage aspiration was repeatedly performed with safety. This seemed to the man a rather expensive method, however, and he placed himself in the care of a homeopathic doctor who introduced a trocar. In twelve hours the patient was dead.

DR. MUNSON mentioned a case of dislocation of the distal end of the clavicle. Is there a better dressing than straps over the injury to the elbow?

DR. BLACK had treated a similar case successfully by this method. The over-riding of the clavicle is the difficulty.

[TO BE CONTINUED.]

Chicago's Milk Supply.—At a recent meeting of the Chicago Medical Society, several papers were read on this subject (*Chicago Med. Record*, July, 1900. The first, "Cow's Milk: Its Production and Marketing," was read by Mr. H. B. Gurler, proprietor of a dairy farm at De Kalb, Ill. He said in brief: We must have a healthy cow to begin with. Care should be taken that the food is not fermented and that the water is pure. The stable should be kept in a sanitary condition, floors clean and ventilation thorough. In changing from dry to green food great care is exercised, as young animals are physiced by this means, and it may possibly have a bad effect on babies. The author thinks that change of milkers, abuse and neglect have an effect not only on the quantity but on the quality of the milk. The cows are tested once a year for tuberculosis. Half an hour before milking the cows are groomed, and immediately before, the udder is carefully washed. Milking is done through absorbent cotton strainers. It is then centrifugalized, and the per cent of cream brought to the standard. It is then immediately cooled to as low a temperature as possible without freezing, bottled and shipped in ice, reaching Chicago below 40° F.

In a paper on "Inspection of Herds by the Veterinarian," A. H. Baker, D. V. S., says that the cow is the most susceptible to disease of all the lower animals. The older they get the more likely are they to be diseased, and after seven years of age we seldom find a healthy cow. Cows should be examined yearly. The tuberculin test is somewhat complicated by the fact that the more extensive the disease the less the reaction. All animals which react should be killed. Tuberculosis of the udder is rare, but actinomycosis is frequent. For animals killed owners receive 15 per cent of the value if the whole carcass is condemned, and from that up to full remuneration where no disease is found.

The next paper, "City of Chicago Milk Inspection," was by Dr. Reynolds, Commissioner of Health. Inspection was begun in 1892, at which time 40 per cent of samples examined were below grade. Tests which have been made since go to show that the tampering is done after the milk reaches the city. This is especially true of the poorer parts of the city, where cheap milk is in demand. Numerous adulterants are used, water, condensed milk, etc., as fast one is detected another is substituted. Formaldehyde is, the author says, the most dangerous of adulterants to the stomachs of young children.

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THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS will hold its thirteenth annual meeting in the Assembly room of the Galt House, Louisville, Ky., Tuesday, Wednesday and Thursday, September 18, 19 and 20, 1900, under the presidency of Dr. Rufus Bartlett Hall, of Cincinnati, O. The following named papers have been offered:

1. President's address, R. B. Hall, Cincinnati.
2. Ovarian fibroma—case with microscopical report—L. H. Laidley, St. Louis.
3. Cholelithiasis—with report of cases—H. E. Hayd, Buffalo.
4. Appendicitis during pregnancy, Charles G. Cumston, Boston.
5. Diagnosis of ectopic pregnancy before rupture, based on ten cases, J. F. Baldwin, Columbus.
6. Three cases of extrauterine pregnancy, with specimens, W. B. Dorsett, St. Louis.
7. The private hospital, Joseph Price, Philadelphia.
8. Paper (Title undetermined), E. F. Fish, Milwaukee.
9. Paper (Title undetermined) C. C. Frederick, Buffalo.
10. Extirpation of the rectum and sigmoid per vaginam, John B. Murphy, Chicago.
11. Paper (Title undetermined) H. O. Pantzer, Indianapolis.
12. Paper (Title undetermined) J. H. Carstens, Detroit.
13. The hymen—of what significance is its presence or absence in determining virginity, John Milton Duff, Pittsburg.
14. Paper (Title undetermined) W. P. Manton, Detroit.
15. Paper (Title undetermined) F. Blume, Pittsburg.
16. A satisfactory method for suspension of the uterus, Robert T. Morris, New York.
17. Paper (Title undetermined) H. W. Longyear, Detroit.
18. Some points regarding surgery of the gall-bladder, A. Vander Veer, Albany.
19. Surgery of the liver and bile ducts, W. G. Macdonald, Albany.
20. Observations respecting malignant disease of pelvic organs. Augustus P. Clarke, Cambridge.
21. Paper (Title undetermined) M. Rosenwasser, Cleveland.
22. Bilateral celiotomy and shortening of the round ligaments for complicated retroversion of the uterus, A. Goldspohn, Chicago.
23. Paper (Title undetermined) W. B. Chase, New York City.
24. Paper (Title undetermined) Charles A. L. Reed, Cincinnati.
25. Round ligament ventrosuspension of the uterus. D. Tod Gilliam, Columbus.
26. Paper (Title undetermined) L. S. McMurtry, Louisville.

The titles of papers are announced in the order of their reception.

The titles of papers are announced in order of their reception. The permanent program will be classified and issued about August 25, after which date no further titles can be added or changes made in the printed program. A cordial invitation is extended to the medical profession to attend the several scientific sessions of the association.

Sun Cholera Mixture.—

Tinct. opium.....
Tinct. capsicum .....
Tinct. rhubarb .....
Tinct. camphor.....aa 1 ounce

M. Sig.: Teaspoonful in water every three hours.

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MEDICAL MISCELLANY

The New York Medical Journal.—Owing to the financial trouble of D. Appleton & Co., the *New York Medical Journal* has been sold, the new owner being Mr. A. R. Elliott, owner and publisher of the *American Druggist*, who conducts an advertising agency in New York. Dr. Frank P. Foster continues as editor, a fact which must meet with the approval of all friends of the *Journal*.

F. A. REW, M.D., Imoden, Ark., says: My experience with S. H. Kennedy's extract of pinus canadensis was so decidedly satisfactory and gratifying that I prescribed it with a positive assurance that benefit will follow its use. On the principle that "all astringents are tonics," I use the pinus canadensis, in small doses, in pneumonia, bronchitis, typhoid fever; indeed, where the mucous membranes need a tonic, and recognizing a similarity between mucous membranes and the external skin, I use it in erysipelas, nervous forms of eczema, and wherever the skin needs a tonic. It is all I need in many cases of ophthalmia and gonorrhea. Its special therapeutics would fill many pages, and I am satisfied that we will yet find new uses for it.

The Portal Circulation.—By T. E. Converse, M. D., Louisville, Ky.—In a large majority of troubles that come to our attention the first manifestations are indicated by the liver, and if the function of this organ can be restored to a normal condition a great many of these troubles can be aborted. Chronic constipation often starts in a congested or obstructed portal circulation and soon all the incidental manifestations of constipation are evidenced. In congested or obstructed portal circulation we want to remedy several conditions. One is to relieve the engorgement of the liver, another to remove the excess of bile in the gall bladder. another to increase the peristaltic action of the small intestines; and to see that the rectum is free from impacted feces. The rectum and liver are intimately associated through the hemorrhoidal arteries and irritation of the rectum deranges the liver, and vice versa. Drastic purges or cholagogues are not indicated, but a stimulating cholagogue which empties the gall bladder is preferable. The bile in the intestinal tract increases the peristalsis and in some cases this movement has to be assisted. These indications are fulfilled in the use of chionia, which is an hepatic stimulant, and indirectly but surely a reliable laxative. In the treatment of derangements of the portal circulation, if the lymphatics are strengthened and stimulated we get anamelioration of the symptoms. Drastic purges are generally used for this purpose, but they will frequently congest the hepatic glands, and in all probability increase the constipation already existing. Chionia stimulates the hepatic glands without producing congestion, and also increases the secretion of bile. Through its regular action on the portal circulation, and its stimulating effect upon the liver, the functions of this organ are increased or restored to normal. In the use of all drugs which act as laxatives or purges it is of great importance that the rectum should be free from impacted feces, and enemas should be used for this purpose, in preference to suppositories, for the latter will often cause a rectal irritation.

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ALTERATIVE MEDICATION.—Henry (Medical Essays), Such combination will ultimately fail if it is not well adapted to the demands of an extended course of treatment. Among facts which may be considered as established by clinical experience are the peculiar tonic and alterative value of the salts of iron, bichloride of mercury and arsenic. They promote appetite, digestion and assimilation, in a word are tonic, and improve the general condition of the system by correcting errors in fluids and functions, in other words are alterative. The combined action of these three drugs is threefold and the action of one is supplementary of the others. He prefers the proto-chloride of iron which stimulates all the glands of the stomach and augments the blood making functions. This action is supplemented by the sedative and oxygen carrying power of the arsenic and the intestine and liver stimulation of the bichloride of mercury. Beside all this when these remedies are properly combined, as in the elixir of the three chlorides (Henry), they do not disturb digestion, cause constipation or produce other unpleasant effects.—Medical News.

THE TREATMENT OF CATARRHAL CONJUNCTIVITIS.—Dr. Milton P. Creel, of Central City, Ky., says:

Either as it appears as a simple catarrhal inflammation of the conjunctiva, affecting one individual or when it is encountered in an epidemic, there is no doubt but that catarrhal conjunctivitis is an affection of great importance. This affection is essentially simple, but if allowed to go along without correct treatment it may terminate in entire loss of vision. However, if the affection be given proper and timely attention it yields with great readiness to treatment.

Either as simple catarrhal conjunctivitis seen in a single individual, or when the affection manifests itself in the epidemic form, the treatment is essentially the same. Of course, individual peculiarities in each case make certain indications fitting and even imperative. One thing which a large experience with the disease has taught me is, that prompt and systematic treatment must be instituted in every case. Often patients with strumous diathesis will have chronic conjunctivitis, and persons whose health is poor will also have protracted forms of the affection, with the loss or great impairment of sight, when if proper and timely treatment had been instituted a cure could have been effected within a very short time. In the treatment of catarrhal conjunctivitis there have been many mischievous measures brought to bear.

All and everything which produces irritation will render all the elements in the case worse. We must never employ strong solutions. A lotion composed of 10 grains of sulphate of zinc to an ounce of distilled water will aggravate any case. All lotions must of necessity be mild and soothing.

As a curative means I have come now to rely on what I term the antiseptic treatment. This has been productive of better results in my hands than the old-time remedies.

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In carrying out this treatment I first have the nurse to bathe the eyes thoroughly with this antiseptic mixture:

℞ Hydrozone 3j
Aqua, q. s. ad 3iv

This mixture is used three or four times daily, as the case may appear to demand. Just as often as this mixture has been copiously applied and the eyelids have been dried, I apply, by means of an ordinary glass medicine dropper, two drops of Marchand's eye balsam.

This remedy reaches every part of the conjunctiva by the movement of the lids, and it is not irritating; the patient generally makes rapid progress to recovery.

By this treatment I have found my patients to recover in from thirty-six hours to three days. In fact my success has been such that I now rely upon this treatment entirely in this affection.

Four months ago an epidemic of catarrhal conjunctivitis broke out in a boarding school. I was called and ordered these remedies used on every case that presented itself. The nuns told me that all the cases got well speedily.

Mr. Samuel S., age 39. This patient had been suffering, as he put it, with "sore eyes" for three days. It was a simple case of catarrhal conjunctivitis, but gave him great discomfort. On the treatment described above he entirely recovered in two days.

Mrs. Laura S., aged 22. This patient thought she had something in her eye, but examination revealed catarrhal conjunctivitis. On this treatment she made a speedy recovery.

These are only two of the several hundred cases treated on the antiseptic principles.—Medical Summary.

THE WORLD'S GREATEST NATURAL SANITARIUM.—For those suffering from pulmonary diseases, rheumatism, catarrh and kindred ills, there is no climate that operates so quickly to the relief of the suffer as that of Salt Lake City and the Great Salt Basin—a combination of salt sea air and mountain ozone. Salt Lake City is one of the most quaint and picturesque places in America, and is justly entitled to its claim of being the World's Greatest Natural Sanitarium on account of its equable climate, its salt lake, its hot and warm sulphur springs and other health restoring features. A bath in Great Salt Lake is very invigorating. One can float on the bosom of the waters with exhilaration and perfect content. Then the Great Mormon Temple, Tabernacle and Church Institutions, likewise the parks, drives, canons, and nearby mountain and lake resorts add very materially to the pleasures of a visit to the "City of the Saints." The trip from Denver or Colorado Springs to Salt Lake City via the Rio Grande Western Ry. in connection with either the Denver & Rio Grande or Colorado Midland R. R. is the grandest on the continent. No other trip can compare with it in scenic effects or novel interest. Apply to Geo. W. Heintz, General Passenger Agent, Salt Lake City, for literature.

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The Medical Fortnightly.

Issued Tenth and Twenty-fifth of Every Month by the Fortnightly Press Co.

UNDER THE EDITORIAL DIRECTION OF

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Secretary: CHARLES WOOD FASSETT, M. D.

A COSMOPOLITAN BIWEEKLY FOR THE GENERAL PRACTITIONER

Editorial Offices in St. Louis, Chicago, Cincinnati, Jacksonville, St. Joseph, Kansas City, and Pueblo, where specimen copies may be obtained and subscriptions will be taken.

Address all business communications to the Fortnightly Press Company.

Address all contributions and books for review to the Editors, Suite 312, Century Building, Saint Louis.

Paris: U. S. Press Building, Espanade des Invalides, Paris Exposition.

Volume XVIII **SEPTEMBER TENTH** **Number 5**

Editorial Department.

The Money Matters of a Young Physician.

THERE is a serio-comedy to be written from the material furnished by the average physician gleaned in his experience with the business side of his profession, especially in the early years of his practice. Thos. B. Bryan says: "Money is so vitally related to morals that there need be no excuse for giving it first consideration in an examination of the personal side of a young business man's life. More than all else, perhaps, its use or abuse will determine his success or failure in the field of manly attainments. No matter how splendid may be his intellectual endowments, how pleasing his personality, or how satisfying his friendships, if he has not capacity to master his private money affairs, he will become their slave, and enter the struggle for the rewards of life with an annoying handicap always ready to discount the full force of his best endeavors."

This is all true. The struggle is real, and usually develops a peculiar kind of courage, necessary to face the seeming overwhelming conditions, until the trials become less and less, or else, the young man gives up the contest and seeks some other occupation, hoping thereby to retrieve his fortunes.

The financial handicap during these years of waiting for practice is a heavy one, and no one can understand what it means until they have experienced it. If the young physician learns to adjust himself to it so that his work in his profession is not indifferent but is thorough, he will survive his years of adversity, achieve professional success, and ultimately win a worldly condition commensurate with his endeavors to be successful. It is a great burden to be in debt, a financial condition often necessary to get started in the profession, but usually this burden is the brake which holds in check the rashness of youth, and, too, is a stimulus for greater endeavor to ultimately "win out." It is the working out of one's salvation which discipline the man, gives him wisdom and marshals his forces so that he makes circumstances which alter his conditions, and does not supinely wait for something to turn up. Just here, in this transitional period of discipline, is where the serio comedy is to be found. This is the

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time when events make or break the career of men and temperamental conditions rule.

It is a period when the weeding-out process takes place; when men who have entered medicine, believing it to be a short road to wealth, or, an easy road to social affluence and opportunity with chances to acquire wealth, find they have been mistaken, and because of their lack of the true spirit which should prompt men to enter medicine, the professional instinct, they fall by the wayside. We should say this is fortunate for our profession, and while many there are who still hold on, and who are not all they should be, to give the tone, the power and professional pride, we so desire in the medical profession, yet, they are the ones who are not judged as true representatives of the profession.

We note, then, that it is after all the money side of medicine, which proves to be the young physician's Shibboleth. If he stands this test, which is one of the most wholesome acts of mental discipline to which he can possibly be subjected, he will have developed, or naturally possesses, characteristics which will give him opportunities to go on in his profession. There is one sure principal of success he has learned, and that is to know his own capabilities. With this always in view, if he is willing to work he will yet "win out"

The after financial considerations for success are easily learned, but the true professional instinct in medicine tends to warp the more material side of this profession, hence, the few physicians who are really wealthy from means obtained through purely professional lines. The tendency of the times, however, is to put medicine as a profession upon more substantial and modern financial basis, but, yet, the young man of the future will have to face the problems of the past and as they exist today. But, he who is worthy will succeed and will win out—the curtain will go down in the last act on this little serio-comedy, crowning the whole with success, and happiness will reign supreme. *Finis.* F. P. N.

Gall-stones.

WE usually confront a case of gall-stones during an acute attack of biliary colic, when the symptoms are severe and at once call for immediate relief from pain. Or, perchance, the attack may not be severe, and be credited to an attack of indigestion; the pain being in the region of the epigastrium. In the attacks of acute biliary colic, the pain is severe and paroxysmal, and is located along the margin of the ribs on the right side, radiating toward the right shoulder or the lower abdominal region. There is evident collapse accompanying the vomiting and retching marked by cold sweat, fast pulse and the facial expression of intense suffering.

These attacks may be short in duration, when the stone is passed without much interference, as when the common duct does not contract upon the obstruction, but usually the presence of the stone causes the duct to contract upon it, and this contraction both delays its passage and causes pain.

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Again, when the attack is very severe, it may be attended or ushered in with a chill. In one case under the writer's observation, the chill preceded the recurrent attacks of colic, followed by fever, with the temperature reaching 102° to 103½°.

In the ball valve variety of gall-stones, which intermittently obstruct the common duct, it is not unusual to have the attack of biliary colic ushered in with a chill. Frequently these cases are mistaken for malarial fever because of the marked intermittent phenomena. The writer has seen such a case, which for four months was under anti-malarial treatment. The points in diagnosis are the presence of jaundice, which deepens after each paroxysm; the biliary colic, the tenderness over the epigastrium, more marked in the gall bladder; the emaciation and the loss of appetite. In this form of the disease the stone acts like a ball valve, and when it obstructs the common duct, then occurs the phenomena due to gall-stones, when the stone is released there is disappearance of the acute symptoms, but more or less evidence of catarrhal inflammation of the biliary passages continue. The liver is usually enlarged in these cases.

The indications for treatment in all cases of gall-stones are first to relieve pain, which can but be done by the hypodermic injection of morphine. When there is no vomiting morphine or codeine may be given by the mouth. Atropine should be used in association with the morphine, because of the relief which it gives to spasm. Morphine and atropine not only relieve the pain, but also the spasm, thus permitting the duct to release its grasp upon the stone, and thus permit it to pass on its journey into the bowels. Hot applications also assist in relaxing spasm, and the hot baths gives the most satisfaction. After the paroxysm it is best to evacuate the gall bladder, and to this end a mercurial purge is given. Calomel in small broken doses will answer very well. And to keep the gall bladder free from obstruction some purgative having chologogue action should be used. The phosphate of sodium in effervescing form daily before breakfast, and is an excellent and serviceable preparation. If after treatment as outlined, there is no relief, then the secondary primary indication is surgical interference, which must be considered, and especially so when the paroxysms are frequent and accompanied with collapse, exhaustion and profound disturbance of nutrition.

The writer has seen an impacted stone in the common duct allowed to remain for a year, when every indication was for its removal. Finally, surgical interference gave a relief which was pleasing to see, first, because of its benefit to the patient; second, because it gives faith to the skeptical in the excellent results which modern surgery is achieving in operations upon the gall bladder. When operative interference is indicated it should be done at once, and thus give relief to the intense suffering of the patient, and lessen the possibilities of complications liable to prove fatal.

F. P. N.

DEFECTIVE nasal breathing in early life is an etiological factor in many ear and throat affections of later life.

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The Reviewer's Table.

Books, Reprints, and Instruments for this department, should be sent to the Editors, St. Louis

THE by-paths of medical literature are few and far between. Black has given an excursion into one of these delightful elysiums, where we can enjoy with him the thoughts and experiences which the years of his work have given him, and see with his philosophic eyes new phases of life, coming within the observation of a physician. It is sometimes a melancholy task to read or hear of the experiences of many of the veterans in medicine who look upon life through pessimistic prisms. Some sound the depths of misery as if the soul of man was made for torture, and even an average well spent life in medicine was to be rewarded with repellant, deliberate iniquitous scorn. Black's "flotsam and jetsam" is good reading; it is encouraging and valuable in suggestion. One feels better after reading such a book, for in retrospect we see the evolution of American medicine in the past forty-three years; we feel optimistic because of the humanizing and elevating tendencies of our honorable profession. Black is an example of the injunction, "Let every man believe what he will, or rather what he can, but let him forebear to express his views if they are of a kind to disturb the heart of humanity." His writings do not disturb, but jibe the jaded, inactive routinist in medicine, so that he too may observe and record, thereby being of use in the world to his fellow-practitioners. This is a book which physicians will enjoy when the day's work is done and the literary hour (just before bedtime, advocated by Weir Mitchell) gives time and opportunity to read. F. P. N.

FORTY-THREE YEARS IN THE MEDICAL PROFESSION. By JOHN JANVIER BLACK, M.D., Member of the College of Physicians of Philadelphia; Member of the Delaware State Medical Society. Philadelphia: J. B. LIPPINCOTT CO. 1900.

PATHOLOGY is the basis of all rational therapeutics. The principles underlying disease are the real foundation of modern methods of treatment. In this day of surgical progress, the surgeon must be grounded thoroughly in pathology. Warren in his excellent text-book has aimed to cover this field of inquiry, so that students and practitioners may have ever before them the principles of surgical pathology as the true guides to relief by surgical methods. The modern aids to diagnosis, viz., regional bacteriological inquiry are thoroughly elaborated and handsomely illustrated. The book embodies the latest researches in surgical pathology, and by reason of its masterly arrangement makes it a valuable book. One that students need and practitioners interested in surgery cannot afford to be without. F. P. N.

SURGICAL PATHOLOGY AND THERAPEUTICS. By JOHN COLLINS WARREN, M.D., LL.D., Professor of Surgery in Harvard University; Surgeon to the Massachusetts General Hospital. Illustrated. Second edition, with appendix containing an enumeration of the scientific aids to surgical diagnosis, together with a series of sections on regional bacteriology. Pages, 873. Price, cloth, $5, net; half-morocco, $6. Philadelphia: W. B. SAUNDERS, 925 Walnut street. 1900.

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WE, in previous reviews of this masterly work, have spoken of its peculiar practical features. In the volume now before us (Vol. III) we note a continuance of these admirable characteristics and a reinforcement of our admiration for the work. As we have before said this work is a model and possesses more than ordinary merit. This is largely due to the wide experience of the gifted authors, their desire to present only such methods as have stood the test of time. The most minute details have not been overlooked in treating of surgical procedures which they recommend. As an example, they take a patient through the whole detail necessary for the preparation for an operation, during the operation and after care. Nothing is left undone so that a physician feels that in following these authors he is doing things as they should be done and in ways that are up-to-date in every detail. This volume covers "The Treatment of the Surgical Affections of the Bones including Amputation," and includes in the first part eight chapters on Fractures of the Clavicle, Scapula, Humerous, Forearm and Hand, Pelvis, Femur, Patella, Leg, Foot, etc. In this part also is given a comprehensive treatise upon Diagnosis of the Bones in six chapters in which among others the authors write of Acute and Chronic Inflammation, Necrosis, Tuberculous Disease, Syphilitic and Rheumatic Affections, Ricketts, Osteomalacia, Acromegaly, Actinomycosis, Tumors, etc. In part two is taken up a most complete and modern consideration of Amputations. For the practitioner whose duties lie in the surgical as well as in the medical field, it would be difficult to find a work containing as much of practical value as is given in this series of volumes. In method as well as in manner, the detailed information is most admirably presented and the copious series of original illustrations are unusually helpful.

A MANUAL OF SURGICAL TREATMENT. By W. WATSON CHEYNE, M. B., F. R. C. S., F. R. S., Professor of Surgery in King's College, London; Surgeon to King's College Hospital, etc., and F. F. BURGHARD, M. D. and M. S. (Lond.), F. R. C. S., Teacher of Practical Surgery in King's College, London, Surgeon to King's College Hospital, etc. In seven imperial octavo volumes, with illustrations. Volume III. 305 pages with 100 illustrations. Cloth., $3.50, net LEA BROTHERS & CO., Philadelphia and New York, 1900.

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THIS is the most exhaustive work in the English language on Diseases of the Stomach. This, the second edition, appearing so soon after the first (about one year) indicates that it has been so appreciated. The gifted author has carefully revised this edition, adding new material in keeping with the development of this growing special department of medicine. Hemmeter is a most painstaking and scientific worker; this fact, together with his rare literary ability, has made possible this monumental work. Even as a model for clear style and diction it would be a leader among American technical books, but it is as a store-house of clinical facts, scientific reasoning and practical suggestion that gives it prestige among books on medicine. We believe this work is great in every sense of the word, and physicians should have it in their library, both as a work of reference and as a text-book.

F. P. N.

DISEASES OF THE STOMACH, Their Special Pathology, Diagnosis and Treatment: with Section on Anatomy, Physiology, Chemistry and Microscopical Examination of Stomach, Contents, Dietetics, Surgery of the Stomach, etc. By JOHN C. HEMMETER, M. D. Illustrated. Second Edition. Enlarged and Revised. Philadelphia: P. BLAKISTON'S SON & CO. 1900.

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GYNECOLOGY. A Manual for Students and Practitioners. By MONTGOMERY A. CROCKETT, M.D., Adjunct Professor of Obstetrics and Clinical Gynecology, Medical Department of Buffalo, etc. Series edited by BERN. B. GILLAUDET, M.D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, New York. Illustrated with 107 engravings. (Lea's Series of Pocket Text-books.) 368 pp.

THIS work embodies the essentials of gynecology in a concise form, suitable for students. It is designed to meet primarily the needs of the student, and the information this manual contains is remarkable for its size. The whole technical field of gynecology is covered so that the principles are fully set forth. Students will find it of special service to them as a stepping-stone into the great field of this modern surgical specialty. M.

A MANUAL OF OPERATIVE SURGERY, by LEWIS A. STIMSON, B. A., M. D., Professor of Surgery in Cornell University Medical College. New (4th) and thoroughly revised edition. In one royal 12mo. volume of 581 pages with 203 illustrations. Just ready. Cloth, $3.00, net. LEA BROTHERS & CO., Philadelphia and New York.

STIMSON'S SURGERY has made for itself a place among the standard works. This edition has been brought up to date in its text by careful revision and now is the most concise, trustworthy and reliable of the smaller works on the market. It is especially good for students, but even the experienced surgeon will find it very serviceable because of its clearness and admirable descriptions of operative technique. The text is improved by a new series of engravings, about three hundred in number. This book is conspicuously practical and deservingly popular. W.

A MANUAL OF SURGICAL TREATMENT. By W. WATSON CHEYNE, M.B., F.R.C.S., F.R.S., Professor of Surgery to King's College Hospital, etc., and F. F. BURGHARD, M. D., and M. S. (Lond.), F.R.C S., Teacher of Practical Surgery in King's College; Surgeon to King's College Hospital, etc. Volume II. 382 pages, with 141 illustrations. Philadelphia and New York: LEA BROTHERS & CO. 1900.

IT IS a pleasure to read a practical book which takes time and space enough to tell what there is to be said on a given subject. Ordinarily, authors in this day of condensation aim to give "essentials," "principles," and "facts." As a result the student is too often left to work out his methods, and how often these are faulty, they know too well. It is easy enough for an author to say "do;" it is quite another thing for the student, and practitioner, too, for that matter, to "do." Cheyne and Burghard have aimed to direct "how to do" in this work. Volume II discusses the surgical affections of the tissues, skin, nails, lymphatics, glands, bursæ, muscles, tendons, and their sheaths, nerves, veins and arteries. The value of the work lies in the fact that it is knowledge gained by experience, and in the face of the many problems which surgeons meet in their daily practice. No method is described but what has stood the test of experience, and in the hands of the authors themselves. We need more of the clinical and less of the didactic in our medical books. This work shonld be a model for similar works in other departments of medicine, because it is good, honest common sense, couched in language which everybody can understand. We predict that the work will live to do greater honor to the brilliant authors and enterprising publishers, all of whom have long since earned grateful recognition from the profession for their painstaking efforts to promote the welfare of medicine.

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Original Department.

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Diseases of the Stomach.

BY J. M. G. CARTER, M. A., M. D., SC. D., PH. D.,

WAUKEGAN, ILL.,

Professor of Clinical and Preventive Medicine (formerly Professor of Pathology), College of Physicians and Surgeons, Chicago (School of Medicine, University of Illinois); Fellow of the American Academy of Medicine; Member of the American Medical Association, the Chicago Medical Society, the Chicago Society of Internal Medicine; late President of the Illinois State Medical Society, etc.

[CONTINUED FROM PAGE 475.]

Estimation of Free Hydrochloric Acid (Mintz's Method).—If the organic acids (especially lactic and the fatty acids) are not present, the hydrochloric acid may be estimated by the method already described. Mintz offers a more exact method, as follows: To 10 c.c. of the filtered stomach contents add decinormal soda solution from a burette until Gunzburg's test no longer gives a reaction. The quantity of alkali bears a definite ratio to the amount of acid. This reaction with Gunzburg's reagent ceases at 0.003646 (to one c.c. soda solution). The alkali combines, *first*, with the free HCl, even in mixtures where the acid occurs with albuminous substances. Observe carefully the point where the reaction is *positive* just below that point; now multiply the number of c.c. of the decinormal soda solution used to neutralize 100 c.c. of the filtrate by 0.003646, and the result will represent the per cent of HCl.

To illustrate: Suppose that Gunzburg's reaction no longer occurs after adding 1.5 c.c. decinormal solution to 10 c.c. of the stomach contents to be tested; but it is positive when only 1.4 c.c. is added. Then 15 will represent the number of c.c. required to neutralize 100 c.c. of the stomach contents in this specimen. Multiply 15 by 0.003646 and the product, 0.05469, represents the per cent of HCl.

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The Diamethyl-Amido-Azo-Benzol Test (Toepfer's Test).—This test is valuable, both on account of its simplicity, and also in view of its ready application to the direct quantitative estimation of the amount of free hydrochloric acid in the gastric juice. The reagent is a brown powder, slightly soluble in water, readily soluble in alcohol.

Use a 0.5 per cent solution in alcohol. On one side of a clean porcelain evaporating dish put one drop of this solution, and on the other side put five drops of the filtered stomach contents, and incline the dish until the two solutions mix. If free hydrochloric acid is present a bright cherry-red color is developed, increasing in intensity in proportion to the amount of free acid present. Add decinormal soda solution until red color disappears; a faint lemon-yellow color is developed.

Estimation of Loosely Combined HCl.—To the filtered stomach contents add a decinormal solution of hydrochloric acid until Gunzburg's reaction is positive. The difference between the amount used to cause Gunzburg's reaction in the specimen tested, and the amount of acid ordinarily required to satisfy the decinormal soda solution will represent the quantity of loosely combined HCl. To state this in another way: Since the *limit* of Gunzburg's reaction is 0.003646 HCl (to 1 c.c. decinormal soda solution), the difference between this and the amount of decinormal HCl solution represents the quantity of HCl. present.

To illustrate: If Gunzburg's reaction is positive after adding 0.8 c.c. normal HCl solution to 100 c.c. of the stomach contents, then 1—0.8=0.2 c.c., represents the amount of loosely combined acid already present.

Another method is as follows: Moisten a strip of blue litmus paper with the gastric contents, and keep this as a standard. Then put a few drops of the stomach contents in a watch glass and add a small amount of powdered, chemically pure, calcium carbonate. Stir with a glass rod, and test with blue litmus paper. Compare with the standard. If the litmus paper no longer reddens, the acidity was entirely due to free acid and not to acid salts; if it is less red, both were present; if there is no change, only acid salts are present. If lactic and the fatty acids have been extracted with ether, if free acid is found it is hydrochloric acid.

Estimation of Free and Loosely Combined HCl.—Mix 10 c.c. of the filtered stomach contents with about 0.5 gramme of barium carbonate in a platinum dish. Evaporate the fluid to dryness and reduce to ash. After cooling, dissolve the residue in 50 to 75 c.c. of boiling water and filter. To the filtrate add several drops of a concentrated soda solution (until the entire Ba cl_2 is converted into Ba Co_3, which is thrown down as a flocculent precipitate). Filter again and collect the precipitate on the filter and wash it; dissolve in HCl, and evaporate to dryness. Dissolve the residue in water and titrate with silver nitrate solution, with the addition of potassium bichromate. One c.c. of the silver solution represents 0.001 sodium chloride, and the quantity of hydrochloric acid may be calculated according to the formula $x : t :: 36.5 : 58.5$, in which it equals the number of c.c. of the silver solution used (Ewald).

The stomach contents may be acid in reaction and the tests for HCl be negative. Under such circumstances it is necessary to make examina-

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tion for the presence of the organic acids, especially lactic, acetic and butyric; the latter being the chief of the fatty acids. These acids resulting from the normal fermentation of starch, sugar and albuminoid bodies due to the action of the gastric juice, occur as regular features of digestion. If, however, they occur in any appreciable amount late in digestion, so as to be detected by known reagents, their occurrence is pathological.

Lactic Acid.—Lactic acid may be detected by a simple method proposed by Uffelmann, which consists in applying a neutral ferric chloride solution to the filtered contents, when the color changes to a canary-yellow if lactic acid is present. On account of a difficulty in recognizing a color change at times, the following is used as more certain and reliable; a few drops (5 to 10) of a diluted solution (1 to per cent) of neutral ferric chloride are mixed with one or two drops of pure carbolic acid or 2½ drachms (5 to 10 c.c.) of a 5 per cent solution of carbolic acid, and water added until the mixture assumes a beautiful amethyst-blue color. A few drops of lactic acid solution (1 to 20000) will change this blue to canary yellow. The delicacy of this reaction may be appreciated from the fact that ʒss (2 c.c.) of this reagent will give the characteristic reaction with 12 min. (0.8 c.c.) of a lactic acid solution of 0.01 per cent. The intensity of the color may be taken as indicating roughly the amount of the acid present. This test is not free from sources of error, however. Lactates as well as free lactic acid produce the yellow color; but for ordinary purposes it answers very well, as it makes no great difference whether the reaction is caused by the acid or the lactates (Ewald).

It does make a difference, however, if the reaction is produced by alcohol, sugar, phosphates and other salts. Under such circumstances, or when the presence of phosphates, especially, is suspected make an ethereal extract of the fluid to be examined, evaporate it and apply the test on the residue left after the evaporation. This extract may be formed simply by mixing thoroughly ʒss to ʒi (2 to 5 c.c.) of the filtered stomach contents with ether. Let the ether separate; this usually occurs rapidly, and then it can be poured off into a small glass vessel. Repeat this process with fresh quantities of ether until an ounce (30 c.c.) has been used. The lactic acid is contained in the ethereal extract. Evaporate this by placing the glass vessel over a hot water bath. Add a few drops of water to the residue and with this try Uffelmann's test by carefully letting one or two drops of the reagent flow from a pipette. This will succeed when lactic acid is present in solutions of 0.5 to 0.75 per 1000. It is not necessary to evaporate the ethereal extract, but the test may be made with that solution with exact results.

Another test for lactic acid and lactates is as follows: Boil the stomach contents until blue litmus paper held over the vessel is no longer reddened. This shows that the volatile acids have been removed. Replace the water which has been lost by evaporation. Set aside to cool, and after cooling pour equal quantities of ether and the specimen into a test-tube; close the tube and, after shaking thoroughly, set away in a vertical position for a few minutes until the layers have been separated, when the

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ether layer should be drawn up by a pipette and placed in a watch glass. Evaporate the ether and dissolve the residue in water, If lactic acid is present, blue litmus paper, Congo red or Uffelmann's reagent will detect it (Leo).

Make three indicators as follows:

Estimation of Hydrochloric Acid (Töpfer's Method):

1st. A one-half per cent alcohol solution dimethyl-amido-azo-bensol.

2d. One per cent aqueous solution of alizarin.

3d. One per cent alcohol solution phenolphthalein.

Add a few drops of solution 1 to 10 c.c. of gastric juice in the flask. If free HCl is present, even in small quantities, a red color occurs. Titrate with decinormal soda solution until the red changes to a clear yellow. Note the number of c.c. soda solution used. To 10 c.c. filtered gastric contents in a beaker add a few drops of solution 2 and titrate with a decinormal solution of caustic soda until the solution assumes a clear violet color. Note amount of soda solution used. To 10 c.c. of gastric juice add two or three drops of solution 3 and titrate with decinormal solution of caustic soda until light rose color is developed; agitate until color is permanent and record the number of c.c. of soda solution employed.

Since solution 1 reacts only in the presence of free hydrochloric acid, and solution 2 reacts in the presence of hydrochloric acid, organic acids and acid salts, by subtracting the figure found in the first titration from the figure of the second, the remainder will indicate the acidity due to organic acids and acid salts. Subtracting again the acidity found by the alizarin solution from that found by the phenolphthalein solution will give the amount of combined hydrochloric acid.

Estimation of Lactic Acid (Method of Strauss).—Take a separating vial, graduated to 5 c.c. below mark, and 25 c c. above; into this put 5 c.c. of gastric juice and 25 c.c. ether. Cork and shake. Let it stand until fluid separates. Turn out gradually to the 5 c.c. mark; add distilled water to the 25 c.c. mark; treat mixture with 2 drops of 10 per cent solution officinal tincture chloride of iron; shake well. If lactic acid is present the color reaction is intense green. This occurs in the proportion of 1 to 1000 or more. If a pale green color develops the proportion is ½ or 1 per 1000.

Fatty Acids (Method of Cahn & Mehring, modified by McNaught).—Determine total acidity by method already described. Evaporate 10 c.c. over water bath until it forms a syrup; add distilled water to raise to 10 c.c. again, and determine acidity as before. The difference in acidity will be the amount due to fatty acids.

Estimation of Acid Salts (Leo's Method).—Put a few drops of filtrate into a watch glass and add a small amount of chemically pure powdered calcium carbonate; stir with a glass rod and test with blue litmus paper; if it turns red, acid salts are present.

Other Acids. Butyric acid changes Uffelmann's reagent to a tawny yellow with a reddish tinge if present in the ratio of 1 to 2000. The same reaction will detect other fatty acids. Butyric acid has the odor of rancid butter, and may be detected by this alone.

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Acetic Acid can be detected by the nose if present in appreciable quantity. Chemically it can be detected by using carbonate of soda to neutralize the watery residue of the ethereal extract previously described, and then adding neutral ferric chloride solution until a beautiful blood-red color appears, like that presented by formic acid with the same solution.

Pepsin, Proteid Digestion.—When HCl is present in normal quantities it unites with the pepsinogen secreted by the peptic glands and forms pepsin. The action of this digestive ferment on proteids produces a series of characteristic derivatives—the albuminates. This process continues until the albuminous substances are converted into a soluble and easily diffusible form called *peptone*.

It is frequently desirable to know whether this process is properly completed in a given case. *Albumen* in the stomach contents is coagulated by heat (158 F.). Syntonin, one of the intermediate products is also coagulated by heat. Propeptone, another intermediate product, and peptone are not coagulated by heat. Albumen and syntonin are precipitated by a saturated solution of sodium sulphate or sodium chloride and acetic acid, cold or warm; and they yield no biuret reaction. Propeptone and peptone do yield the *biuret reaction;* that is, if cupric sulphate is added to them in cold alkaline solution, an intense purple-red color is observed. Propeptone is precipitated cold by a saturated solution of sodium chloride and acetic acid. Albumen, syntonin and propeptone are precipitated by nitric and acetic acids, acetic acid and ferrocyanide of potash, acetate of lead, metaphosphoric acid, ammonium sulphate; and albumen, syntonin, propeptone and peptone are all precipitated by mercuric chloride, phosphotungstic acid, phosphomolybdic acid, tannin, and mercuric iodide. These reactions are valuable as a means of determining whether HCl and pepsin are properly performing their functions in the process of digestion.

Method.—If heat be applied to the filtered stomach contents, and coagulation occurs, it indicates the presence of albumen or syntonin, or both; if coagulation does not occur, propeptone or peptone may be present. If the filtrate is acid and coagulation occurs, neutralize. If a precipitate be thrown down, it is syntonin. Filter out this precipitate and to the filtrate add an equal quantity of concentrated solution of sodium chloride and acidulate with acetic acid; any precipitate thrown down which is redissolved on heating is due to propeptone. The biuret reaction will be positive. Remove the latter precipitate by filtration, and treat the filtrate with acetic acid and ferrocyanide of potash; if no precipitate is obtained, try the biuret reaction. If that is positive, try tannin or the salts of the heavy metals, mercuric chloride, phosphotungstic acid, etc. If a precipitate appears it is peptone.

As propeptone is absent in the digestion of meat and present in the digestion of egg albumen and plant albuminates, the demonstration of its presence in the stomach contents is a matter of considerable interest and importance. The more marked the reactions for propeptone are, after a test meal, the less the amount of peptone which has been removed and is still to be removed from the stomach.

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After the test-breakfast previously described, the albumen should be so far digested at the end of an hour that propeptone appears only in small quantity (trace) if at all. If it is abundant at that time digestion is abnormally slow. The intensity of the biuret reaction will serve as an approximate guide to the amount of peptone, by comparing with the color produced by a peptone solution of known strength. It must be borne in mind, however, that the peptones are not completely formed in the stomach, the process being finished in the intestines.

Discs of albumen (boiled white of egg) may be placed in the stomach contents and the process of the liquefaction (proteolysis) observed. By this means one may discover whether the process is too rapid, too slow, or not at all accomplished. The liquid should be kept in an incubator at a temperature of about 100° F. A little hydrochloric acid or pepsin may be added, if necessary, to facilitate the process, and thus the deficiency in the gastric juice may be discovered. This may be done by preparing four test-tubes, and partly filling each with filtered stomach contents; let one contain the filtrate only, the second may be acidulated with HCl, 2 drops to 31 (.15 to 4c.c.); to the third add pepsin, and to the fourth add both HCl and pepsin. A comparison of the rapidity of the process of liquefaction in the four tubes will show what element in digestion is at fault. It should be remembered that when a certain percentage of peptone is reached, its further production is retarded. This is similar to the natural process, but as in all laboratory experiments, it is not a perfect representation of nature's work.

Rennin.—If it is desired to determine whether *rennet* is present in the stomach contents add two or three drops of the filtrate to 10 c.c. of *raw* milk. If this mixture is kept in a warm place the presence of rennet will be indicated by coagulation of the milk in from one minute to several hours. The characteristic coagulum by rennet is a cake of casein floating in clear serum. That of acids is flaky or lumpy. The absence of rennet from the gastric juice indicates atrophy of the mucosa.

Digestion of Carbohydrates.—During the process of digestion of carbohydrates it has been found that the formation of sugar ceases when HCl reaches 0.01 per cent or more, or when the lactic acid reaches 0.1 per cent or 0.2 per cent; but if the acidity depends upon butyric or fatty acids it may reach 0.4 per cent before the formation of sugar ceases. That is, pytalin cannot perform its function of transforming the starches and sugars in the presence of large quantities of acids.

Lugol's Solution is a reliable test for starch. The blue reaction becomes feebler as the proportion of starch grows less. The intermediate products in the digestion of starch—dextrin, erythrodextrin, achroödextrin and maltose—produce no decided color change. Hence the disappearance of starch from the stomach contents can be discovered very readily. This disappearance is complete in normal cases at the end of an hour after eating (Ewald). The occurrance of a purple-blue color which indicates dextrin, a red color which indicates erythrodextrin, a yellowish tint which indicates achroödextrin, or a blue color which indicates starch, shows that the diges-

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tive changes are not complete. If this test is positive an hour after taking the test-meal it indicates too great acidity of the stomach contents, or a deficiency of ptyalin. The presence of maltose or sugar may be determined by Trommer's test.

Motor Function of the Stomach (the Salol Test).—It has been discovered by Sievers and Ewald that salol is separated into its constituents, phenol and salicylic acid, by the pancreatic juice, but not by acids nor by artificial digestive mixtures with pepsin and hydrochloric acid. On account of this action of salol with the pancreatic fluid, it has been suggested that salol will enable us to determine two important things: the condition of motion of the stomach and whether the pancreas is properly performing its function. If both these functions are normal salicyluric acid can be ordinarily detected in the urine in 60 or 75 minutes after administering salol. The method is as follows: During the process of digestion give the patient 15 grains (1 gramme) of salol in powder or capsule. Empty the bladder of urine. Every half hour after the administration of the drug examine the urine by putting on filter paper a drop each of the urine and a 10 per cent solution of neutral ferric chloride. The smallest trace of salicyluric acid will cause a violet color to appear at the edge of the drop. If the test is positive after twenty-four hours it is pathological. As salol is not absorbed by the stomach to any appreciable extent the continuance of the presence of salicyluric acid in the urine for more than one day would point to retarded or impaired motor function of the stomach.

The easiest and one of the best ways to test motor function of the stomach is to wash out the organ in the morning by means of lavage. This is done before breakfast, If food debris is found in the wash water it is evidence of impaired motor function. The patient should eat a hearty meal the evening before the operation.

Absorptive Function of the Stomach.—The absorptive function is determined by giving five grains (.33) of the iodide of potassium in a thin gelatin capsule. By means of a strip of starch filter paper the saliva should be tested every two minutes after seven minutes. The blue color ought to appear in eight to fifteen minutes if absorption is normal.

PHYSICAL METHODS OF EXAMINATION OF THE STOMACH.

Inspection.—Inspection is frequently valuable, and often enables one to determine the site of a tumor or great distention with gas when the stomach is too sensitive to admit of palpation or percussion.

Palpation.—The importance of palpation in the investigation of diseases of the stomach is not likely to be overestimated. This should be practiced when the patient is in the recumbent position and, if possible, free from agitation or nervous excitement. The hand should be laid perfectly flat on the surface. Then by pressing gently and successively the ball of the hand and the fingers, the presence of any tumor on the anterior or lower surface can ordinarily be detected. Care should be exercised to avoid giving pain or distress, as this will cause contraction of the abdominal muscles and interfere with the examination.

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Percussion.—Percussion is more important than inspection, and the variations in the percussion note are sometimes very marked, varying from the clear tone of gaseous distention to the flat sound elicited over a tumor. The value of palpation and percussion is sometimes increased by filling the stomach with air, gas or water. The object of these procedures usually is to determine the size of the stomach.

Auscultation.—The use of the stethoscope and phenendoscope is valuable in detecting sounds which have special significance.

The Splashing Sound (Clapotage) is heard when the stomach is partly filled with liquid and partly with gas or air. It is elicited by striking the abdominal wall in the region of the stomach and may be heard at a distance from the patient. It is a valuable diagnostic sign in dilatation (Bouchard); but it must be considered in connection with other symptoms of that condition, for it has been heard in the absence of gastric derangements of any kind (Rose). It is valuable as an aid in determining the position of the stomach. It may occur in an empty stomach (Rémond and Debove).

Deglutition Sounds.—When drinking there is a sound heard simultaneously with the act of swallowing (first deglutition sound) and more frequently one is heard about seven seconds after (second deglutition sound). These sounds first described by Kronecker and Meltzer, can be heard at the ensiform process by the ear or with the stethoscope. If the cardia is not permeable the sounds are not heard, hence in suspected stricture or stenosis of the cardia we should examine carefully for the degiutition sounds.

A Dripping Sound can be heard by placing the ear on the epigastric region when the patient is drinking; this is due to fluid passing along the gastric wall.

The Succussion Sound.—This sound was described by Hippocrates. It is made by shaking the patient. If the stomach is enlarged and contains gas and liquid, a splashing sound may be heard sometimes at considerable distance from the patient. It may sometimes be produced by changing the position of the body. It is present in dilatation, and often is diagnostic of gastroptosis or entroptosis.

Gurgling Sounds (growling, as the Germans say) may be heard when the stomach contracts, as when one is hungry.

Respiratory Sounds.—These are sounds often produced during inspiration or expiration, especially in dilatation and gastrotopsis; sometimes in vertical stomach, particularly in women who wear corsets.

Sizzling Sounds.—These, heard only on direct auscultation, are produced by gas forming quickly in the stomach, as after giving bicarbonate of soda and tartaric acid, and in fermentation.

[CONTINUED.]

WHEN you have blood on your hands, first wash them in pure water. Using soap at first is a mistake, as soapy water does not dissolve blood rapidly. Clear water and a nail-brush should come first, soap next.

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The Physiology of Voice Production.

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Read before the St. Louis Academy of Science, May 21, 1900.

UNFORTUNATELY for the proper development and study of the singing voice, schools of vocal culture had been established many years prior to the discovery of the actual physiologic mechanism of the vocal organs and the numerous accessory structures which are of such vital importance to the proper understanding of tone production. Scarcely fifty years have elapsed since Manuel Garcia, the celebrated maestro, startled the scientific and musical world with the results of his experimental research and observations of the human larynx during phonation. The introduction by Garcia of the laryngoscope, a small round mirror, by means of which he first succeeded in seeing his own larynx and watching its movements in respiration, in the formation of vowels and in singing, inaugurated a new epoch in the study and development of vocal culture. Prior to this time much that was known concerning the larynx and its mechanism was speculative in character, and information was gleaned from dissections of the larynx in the dead, and observations of the vocal apparatus of the lower animals.

With the advent of the laryngoscope, its introduction by Garcia, and demonstration by Czermak, we record the first actual scientific observations of the vibrating vocal bands and the mechanism of the interior of the larynx. Since then, laryngoscopy, or the examination of the larynx by reflected light, has contributed to the scientific world an intense and unusually strong impetus, and has developed to its present high degree the entire field of laryngology in the treatment and diagnosis of this area. Strange to say, however, while the development in this branch of medical science has been unusually active, the physiology of the vocal organs has remained in comparative obscurity, and the data which we possess today are still meagre. Even today the laryngologist must contend with prejudices and traditions which are tenderly nursed by celebrated maestros and teachers of music. One by one accurate observations of science are being substituted for the theories and erroneous observations of entire schools of singing, as handed down from teacher to pupil.

Without malice or criticism, it has been my frequent observation in my association with teachers of vocal music and in the treatment of the singing voice, that there are but few teachers or pupils who have ever seen a human larynx dissected, or observed the vocal cords during phonation. It may not be inopportune, therefore, to here offer a plea for the closer association of the teacher of vocal music with the laryngologist. For the proper understanding of voice production, a knowledge of the anatomy and physiology of the larynx and the accessory voice organs should be as important

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a factor in the education of the teacher and pupil of singing as is a proper knowledge of breathing and an understanding of tone-placing. It should not be presupposed that the proper use of the voice can be naturally acquired. To those who are experienced in the training of the voice, it is known that a successful education of the voice depends on laborious effort, continued practice and skillful training.

In the consideration of the physiology of voice production there are three essential factors: 1. *Motor Force.* 2. *The Vibration Element.* 3. *The Resonators.* From a purely physical standpoint these are the three factors present in the production of every musical sound.

MOTOR FORCE.

In the human economy the first element of voice production includes the lungs, bronchial tubes and the trachea together with the all-important muscles which control the movements of these organs. The first element of voice production, i. e., the proper control of the breath in singing has furnished the bulk of controvery in the world of voice culture. Entire schools of singing are based on impiricism, the foundation of which is the use of certain groups of muscles to control the propulsion of air through the larynx. Of the forms of breathing, therefore, we may enumerate three subdivisions: 1. Diaphragmatic. 2. Costal. 3. Clavicular.

Diaphragmatic Breathing.—By far the most important muscular agent to be considered in respiration is the powerful diaphragm, that broad expanse of fibrous muscular tissue which serves as a partition between the abdominal and the thoracic cavities. In a state of rest the diaphragm arches upwards, dome-like into the thoracic cavity and on its convex surface rest the bases of the lungs. During the act of inspiration the diaphragm descends towards the abdominal cavity, in which the flattening of its surface creates an additional area in the chest cavity for the inflated lungs. With the expiratory movement the diaphragm returns to its natural arched position. In conjunction with the diaphragm and of the first importance in the control of breathing are the strong anterior muscles of the abdomen.

Costal Breathing.—With every inspiration of air and inflation of the lungs there is an elevation and forward protrusion of the bony frame-work of the chest formed mainly by the ribs and breast-bone. This section of the thorax is more rigid in character by virtue of its bony structure, its short intercostal muscles and its topographical connection with the less elastic portion of the lungs, and thus necessarily limits the expansion power of this region very materially.

The limitation to general respiration which takes place with costal breathing is still a subject of controversy. Some authors maintain that costal breathing admits of as much, and of even greater expansion power than can be acquired by the abdominal type of breathing. On the other hand, it is a practical and constant observation that most women, because of the pressure and fixation of the lower area of the thorax by corsets and stays, largely practice that form of respiration which engages mainly the upper ribs or high costal breathing.

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Again, the very construction and arrangement of the lungs indicate the importance and greater service of the abdominal and diaphragmatic type of respiration. The bases of the lungs are in the lower thorax in close relation to the upper arched surface of the diaphragm, and here the naturally roomy cavity allows of the greatest expansion of the lung tissue during inspiration. The area of expansion, the capacity in cubic inches of air of the inflated vesicles, is approximately greater as the actual size of the base of the lung is greater than the size of the apex. The apex of the lungs lies in the high costal and clavicular region of the thorax, and it is here that we must anatomically confine ourselves to narrow limits of expansion and the maintenance of lesser volumes of air.

I would go one step further in the assertion that costal breathing is less under control than breathing of the abdominal or diaphragmatic type. I base this assertion again on anatomical and physiological facts. The diaphragm is a muscle, which by practice may be brought under almost absolute control of the expert singer; it is the largest muscle of the body, and re-enforced by the strong recti muscles of the abdomen, it constitutes the highest element of muscular strength of the trunk. Compare with this wide expanse of muscle force the small intercostal muscles with their attachment from rib to rib, short muscular bands of scarcely a finger's width, with the bony tissues of the chest to check their excursions, and it is rational to add this as another evidence of the limitations of costal breathing.

Clavicular Breathing.—What may be said of the costal type of breathing is true in an even greater measure of respiration in the clavicular area. The clavicular area of the thorax is almost a rigid one. The clavicles and scapules enter largely into the conformation of the thoracic girdle, and, together with the vertebral column, form the bony frame for the attachment of the upper extremities. This thoracic girdle is to the upper part of the trunk and to the upper extremities as the pelvic girdle is to the lower trunk and the lower extremities. These girdles are the fixed points of the trunk. In very forcible breathing the clavicular element is brought into action, the clavicle drawn upwards by the muscles of the neck to admit of the better expansion of the upper ribs. Clavicular breathing should not be cultivated, and is rarely used, except during violent exertions, or in certain forms of disease where deep respiration is accomplished with difficulty. Even from an esthetic point of view, clavicular breathing should be discouraged, as it occasions ungainly, awkward, upward movements of the shoulders during singing.

In the normal human body natural respiration is conducted by the combined efforts of the diaphragmatic and costal types of breathing, and it appears rational to claim that this natural combination of forces acting in unison should be cultivated in vocalization. It will be demonstrated later that either the diaphragmatic or the costal predominates in the same individual, according to the character of the tone produced.

The type of breathing also varies greatly with the individual; some breathing with the abdomen, and some with the chest. The abdominal form of respiration predominates in the male; the high costal and clavicular form in the female, and the abdominal type in the child. Perhaps the cor-

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set and stay is ordinarily responsible for this variation. The predominance of the abdominal form of breathing in the man and the child, where no constriction of the thorax has been applied, and where no consequent evolution, as a result of this mechanical support has followed, will warrant the conclusion that the abdominal respiration is distinctly the natural physiological breathing method.

There are rational physiological reasons to account for the upper section of the thorax being engaged in respiration in the female, but authorities apparently agree that the high costal and clavicular form of breathing, now so universally used by the female, scarcely existed in the normal condition, and that the constrictive action of the corset is the main factor in this evolution.

In ordinary respiration it is the function of the lungs to oxygenate and purify the blood, and this is produced in the normal human in an even, almost automatic manner. In respiration during singing there is a more complex consideration, and the respiratory acts are produced with greater effort. It is the object of the singer: First. To increase the capacity of the chest. Second. To expel the air under strong pressure. Third. To regulate the expiratory act. Fourth. To increase the resonance of the thoracic cavity.

In singing, therefore, muscular forces are developed which do not enter into play in normal respiration, and it is to the cultivation of these special forces that teachers of singing direct their first attention.

Breathing exercises and deep inspiratory efforts should be one of the first practical applications in the training of the singing voice.

All exercises then which bring the respiratory functions into full play are of inestimable value to the singer, and we have often been surprised to see what beautiful forms and robust chest development is presented in vocal artists.

THE VIBRATING ELEMENT.

The Larynx.—In this cursory description of the vocal organs I can scarcely be expected to do justice to one of the most delicate and complex structures of the human body, the human larynx.

Anatomatically the larynx is an expansion of the upper portion of the trachea, its lower end being continuous with the wind-pipe, and through it with the bronchial tubes and lungs. It is a framework composed of cartilages of various sizes and shapes connected by muscles and fibrous bands. The essential organ of voice is contained within this cartilaginous cavity; it consists of two membraneous lips, usually called the vocal cords, which extend from the front to the back of this space. In front they are attached to the inner part of the angle formed by the junction of the two wings of the large thyroid cartilages, and behind to the vocal process of the arytenoid cartilage; the two vocal cords are, therefore, close together anteriorly and divergent posteriorly. Attached to the outer edge of the cords is a small muscle (thyro-arytenoid), which has an important function in the movements of the cords. It should be noted, therefore, that the vocal cord is not a strong or flat band, but the free edge of a projecting, triangular fold of membrane.

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In construction the vocal cords are composed of fine elastic tissue, some fibrous material and delicate mucous membrane. The vocal cords with the arytenoid cartilages enclose a small space forming the opening of an air passage, and known as the glottis, and the free edges of the vocal cords constitute the lips of the glottis. It is the vibration of these free edges or lips which produces the voice. The length of each vocal cord is a trifle more than one-half an inch in the man, and rather less than one-half an inch in the woman ; the male glottis, as a whole, is very nearly an inch, and the female not quite three-fourths of an inch. Immediately above the vocal cord, on each side, is a little pocket or ventricle, which is very variable in size, sometimes appearing as a mere slit, and again being large enough to admit the point of the finger. The lower edge of this opening is formed by the vocal cord itself, whilst the upper consists of a narrow fringe of membrane known as the false cord, or technically called by Sir Morell Mackenzie the "ventricular band." The ventricular band is nothing more than the lower edge of a membranous fold stretched from one side of the epiglottis in front to the arytenoid cartilage behind, and completing the side wall of the upper portion of the larynx.

It is to the series of muscles attached to these cartilages and cords, and to their tension and relaxation, that the variation in quality, tone and intensity of the voice is produced. It is the training of these groups of muscles which play such a vital role in the mechanism of voice production. The action of these muscles is exceedingly complicated, and even with the rapid development thus far made in the study of the larynx, there is still much information required before our knowledge of the science of voice production can be considered complete.

The vocal cords are stretched by the contraction of the crico-thyroid, relaxed by the thyro-arytenoid, approximated by the lateral crico arytenoid, and separated by the posterior crico-arytenoid muscles. The cartilages forming the framework of the larynx are also drawn together by the arytenoids and the posterior portion of the chink of the glottis closed. There are other auxiliary muscles which draw the entire larynx forwards or downwards. These, then, are the functioning agents of the larynx, and constitute the second subdivision of the physiology of voice production where tone vibrations are produced and projected upwards into the resonating chambers.

THE RESONATORS.

The lungs regulate the intensity of vocal sounds; the vibration of the vocal cords control the pitch of sound; the resonators impart to the voice its special quality or "timbre."

Some physicians assert that the larynx and vocal bands produce the quality and timbre of tone, and the comparison is drawn, likening the larynx to the vibrations produced in a reed, flute or string instrument. Even should we admit that the human voice organs may be compared with the tone produced by the violin or piano, for example, physicists must agree that the sounding box of a musical instrument is mainly responsible for the quality and timbre of the tone produced. It is to the delicacy of construc-

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tion and resonant character of the violin case of a Stradivarius or Cremona that the wonderful quality of tone elicited from these master instruments is attributable. There may be intensity of tone, there may be unusual range of voice, but without proper resonating chambers there can never be quality and timbre in the human voice. These resonating chambers, or, as a previous writer has so aptly termed them, "hollow spaces," may be broadly enumerated as the chest, the pharyngeal, oral and nasal cavities, and their accessory sinuses and spaces.

When a deep note is sounded, the hand placed on the chest feels the strong vibration through its walls. This is due to the transmission downward from the vibrating cords through the trachea and bronchial tubes, and these in turn imparting the vibration through the air spaces of the chest cavity to its walls.

The upper funnel-shaped section of the larynx bounded by the vocal bands below and the epiglottis above constitutes the immediate resonating chamber of the larynx. The function of this space is not yet clearly appreciated. By the muscular contraction of these parts the glottis may be almost entirely closed, or the area widely increased by muscle relaxation.

As we ascend from the lungs and larnyx to the upper respiratory tract, we reach the actually important resonators. The largest of these is the pharynx, irregularly shaped, and extending from the base of the trunk and surface of the larynx to the base of the skull, opens into the mouth and communicates with the back of the nose by two passages called the posterior nares. The extremely elastic muscular walls of the pharynx afford the possibility of most remarkable variations in the size and shape of this cavity, and thus tends to change the vocal sounds projected into it, and somewhat alternating the tone and greatly modifying the quality. Of equal importance with the pharynx as a resonator, because of the functions of some of its component parts is the cavity of the mouth. Of special physiological value in this cavity we must mention its superior boundary, composed of the hard palate, soft palate and uvula. The varying conformation of the hard palate anatomically frequently determines the entire conformation of the mouth cavity, and thus is of extreme importance in the consideration of the singing voice. We have frequently observed that the highly arched palate is most usually associated with irregularities and deformities of the teeth, with a diminution of the caliber of the nasal spaces, adenoid growths and impaired nasal respiration, all of which greatly handicap, and sometimes entirely prevent the production of a clear tone.

Attached to the hard palate and continuous with its lining membrane is a broad, flexible curtain, the soft palate, dividing the pharynx into its nasal and oral parts. The soft palate is essentially muscle-tissue covered by mucus membrane, and by practice this muscle may be brought almost entirely under control of the singer. Projecting from the center of its free edge is a small appendage known as the uvula, which, besides acting in unison with the soft palate, has also an independent muscular function. To the present time the physiological function of the uvula is a matter of some doubt. So great an authority as Jenny Lind considered that purity of

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tone depended largely on accurate training of the uvula, and advocated that this little appendage should be carefully trained, so that it may always be kept at a high level, and thus out of the way of the sound projected from the larynx.

I desire to add as my personal observation concerning the possible function of the uvula, that it serves the soft palate as a sort of ballast when sound waves are impinged upon it, its purpose being similar to that of the controlling governor to an engine.

When referring to the physiological functions of special organs I limit myself to those functions which are concerned in the acts of voice production only.

The last of the resonating chambers to be considered is the nose. By a partly bony and partly cartilaginous vertical partition the nose is divided into two long narrow passages, each extending upward almost as far as the base of the brain, and downward to communicate with the pharynx. Associated with the nose as air spaces and also considered as resonating chambers, we must not forget to mention a series of cavities projecting within the bones of the face and communicating by narrow channels with the nasal cavities proper.

It may not be inopportune at this point to emphasize the importance of the role which the nose plays in the physiology of respiration in addition to its other functions as the special organ of the sense of smell and as an important resonating chamber. The nose and the mouth are the two points of entrance of the air during breathing, and of these the nose is the natural physiological viaduct. By means of the small, stiff hairs or vibrissæ situated in the nasal vestibule, all air is filtered of its dust and impurities; the natural moisture of the mucous membrane, which lines the entire nasal tract, imparts the necessary moisture to the inspired air, and it is to this agent also that we are responsible for the proper warming of the air current before it enters the more delicate respiratory tract. Filtration, moistening and warming of the air are the respiratory functions assigned to the nose. If changes in the normal structure of the nasal passages ensue, such as catarrhal irritation, producing a congestion or thickening of the mucous membrane, thus narrowing the natural lumen of this tract; if over-growth of nasal tissue, injuries resulting in deformities of the septum, or new growths occur to obstruct the nasal passages, it reduces the possibility of nasal respiration to a minimum, and compels the individual to breathe through the mouth. The baneful influence of mouth breathing cannot be over-estimated, for it is to this condition, primarily, that we can trace so many of the pathological conditions of the pharynx, larynx, bronchial tubes and lungs. Not only are the physiological functions of the nose impaired by these conditions or lesions which interfere with its natural lumen, but the nasal passages as natural resonating chambers are likewise limited in voice production. This is essentially true in the case of head-tones and the head register, which depend for their purity on a clear pharyngeal vault and unobstructed nasal channels.

A word should be added concerning pathological changes occurring in the mouth and pharynx, and here again the question of the resonators and their intimate relationship to proper tone-placing is apparent.

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Among the more common lesions frequently observed in this region should be mentioned enlargement of the faucial tonsils, elongation of the uvula and over-growth of tissue in the vault of the pharynx, scientifically known as adenoid vegetation or enlargement of the pharyngeal tonsil.

Increase in size of the faucil tonsil is one of the commonest of throat affections. Here it is that this tissue is sometimes increased in size to such an extent that the two tonsils situated on either lateral wall of the pharynx may even touch each other in the median line of the oral cavity. The only procedure under such conditions is the surgical removal of this tissue. Many singers have conceived the idea, again apparently handed down from time immemorial, that the removal of this tonsillar tissue may cause permanent injury to the voice. Let such be assured that this is a practicable impossibility when this removal is undertaken in a skillful manner. It is utterly impossible to acquire a good voice effect with an over-growth or tonsil tissue, first, because these foreign bodies interfere with the important resonating cavity; second, because the musculature of the lateral walls of the pharynx is compelled to lift an additional abnormal amount of tissue. The same may be said of an elongation of the uvula, where the important action of the soft palate is greatly handicapped by an over-growth of this little projecting mass.

Of even greater importance to the sounding mechanism is a hyperplasia of the lymphoid tissue in the vault of the pharynx—that known as adenoid tissue. To produce a clear head tone with the vault of the pharynx thus obstructed is an absolute impossibility. If there is one point in this paper which I desire to emphasize above others, it is the vital functions of the resonators, and the necessity of maintaining their normal anatomical conditions for the production of a pure tone quality. The maintenance of a normal condition and the proper training of these resonating chambers constitutes one of the secrets of high-class vocal art, and any factor which tends to impair the formation of these areas will mar the effects of a voice, however beautiful its pitch or volume may be.

Vocal Registers.—Behnke defines a vocal register as "consisting of a series of tones, which can be produced by the same mechanism." Two registers, the "chest register" and the "head register," are recognized for the male voice; three registers, "chest register," "middle register," and "head register" for the female voice.

The "chest register" depends on the vibration of the entire length, breadth and substance of the vocal chords in conjunction with the resonating cavity of the chest. The singer feels as though the wind-pipe were in vibratory motion. The stronger the tone, the stronger also the vibrating sensation of the wind-pipe. This tone production is re-enforced by the chest cavity itself acting as a resonating chamber. The chest voice is distinguished by its superior volume and power as compared to the other registers. This voice, as Helmholtz has proved, is replete with over-tones, which may be perceived by the ear alone, or with the aid of resonators. In the chest voice the arytenoid cartilages are close together, and the cords form a very narrow linear space. The conformation of the head tones is accomplished by elevation of the larynx, shortening of the pharynx and

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raising of the soft palate with the open mouth. The vibrating cords are shortened and form an elliptical space, and the resonating chambers of the vault of the pharynx and nasal cavities are brought into full play. One of the highest elements of vocal art consists in the production of tones in the register to which they may be physiologically assigned, also in the merging from one register to another.

The comment appears rational from a scientific standpoint that head-tones produced with the mechanism of a chest register or chest tones produced with the mechanism of a head register are wrong in technique, and possibly ultimately injurious to the voice.

Tones and Over-Tones.—Helmholtz asserts in his dessertation, "Sensasations of Tone," that "prime tones possessing the same force and pitch sound exactly alike, no matter from what instrument or medium they arise." The differentiation, therefore, between the tones of the violin and those of the piano is dependent not on the initial or prime tone, but on the combination of the over-tones. Likewise, the richness in quality or timbre of the human voice depends on the variation and combination of the over-tones. It is claimed that the human voice is capable of producing single tones, especially under the stress of great emotion, but in the consideration of the singing voice artistic tone production is the result of compound over-tones, produced by the reflection of the original or prime tone against the resonating chambers, which have been considered in the question of voice production.

Here, again, it is imperative to emphasize the importance of these resonating chambers, as on their proper conformation and relationship to the larynx depends one of the most valuable features of voice culture and tone production, namely, quality, sound, color, or, as the French so aptly term it, "timbre," that characteristic of voice which determines its individuality, and is dependent upon the anatomical differences in the human larynx and its accessory resonating chambers. The flute, clarinet, violin or 'cello may all produce the same note, the tone in each being made with the same intensity and of the same pitch, yet each will have a stamp of its own. The main factors contributing to this difference of tone color are: 1. The conformation and variation in area of the resonating chamber. 2. The distance of the vibrating source of sound from the resonating chamber. 3. The composition of the vibrating cord itself.

Classification of Voices.—The same factors which produce the differentiation in the quality of tone in the violin, 'cello, flute and clarinet are equally applicable in determining the classification of the singing voice. Here we have in the female the soprano, mezzo soprano and contralto; in the male the tenor, baritone and bass.

Laryngoscopic examination reveals the fact that the vocal cords of the bass and contralto are longer and thicker than those of the soprano and tenor cords. The variation in the conformation of the larynx partially determines the difference in tone quality in the human voice, just as the difference in form and size of the sounding box determines the difference in quality of the tone produced in stringed instruments, or as the shape and length of the resonating cavity in a reed instrument. The third factor in-

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volved in the differentiation of tone quality or tone color is the size and weight of the vocal cord itself and a delicately balanced proportion between the vocal cords, the larynx and resonating chambers.

The Ear in Voice Culture.—In the study of the singing voice it is of much importance to consider the human ear as a factor in voice cultivation, and for a graphic description of this relationship I take the liberty of quoting from Semon, as follows:

"There are almost as many different senses in which the expression 'musical ear' may be taken as there are with regard to the expression 'musical' in general. It is perfectly well-known that whilst in some persons the musical ear is, by a generous gift of nature, even if entirely untutored, yet endowed with the keenest qualities of perception, of action based upon that perception, other people, equally intelligent, are entirely deprived of any natural endowment in this particular direction, and have, as the saying goes, absolutely 'no ear for music.' Now, this may mean a great many different things. Some people have no ear for pitch, others none for melody. The former will not hear even the most abominable flat or sharp singing; the latter will never recognize even the most catching melodies, however often they may have heard them.

"Upon the tympana of others music makes a directly painful impression. A third class has absolutely no sense of rhythm, and cannot distinguish a march from a waltz; again, others—and here we come to the subject now under consideration—though having a keen enough perception of music, and being ready enough to detect faults in others, are utterly unaware either of the quality or of the pitch of their own voices."

Voices may, therefore, be possessed of surpassing richness and power, yet with a defective "musical ear," artistic tone production and singing true to pitch may be impossible.

It is scarcely possible in a single paper to consider the many details of the singing voice and the physiological mechanism dependent thereon. I have rather endeavored to present a comprehensive outline of the physiology of voice production, based on facts not theories, and actual observations and not traditions.

In conclusion, permit me to summarize the essential features herein presented:

1. All elements carefully considered, the best form of breathing applicable to voice production and singing is the rational combination of the costal with the diaphragmatic type. Reserve force in breathing is best attained by deep inspiration, fixation of the distended diaphragm and thorax, and control of these muscles while tone is produced.

2. To facilitate vocalization, the larynx should never be tightly contracted by the muscles of the throat, especially in the production of the upper registers.

3. On the resonating cavities, their proper conformation and position in relation to the vibrating cords and larynx depends the quality and timbre of the voice, and the careful and proper placing of tones is perhaps the most essential factor in voice production.

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A Rare Condition of the Male Sexual Organs.

BY EDWARD BOWE, M. D.,

JACKSONVILLE, ILL.

Reported to the Jacksonville Medical Club.

THE case I wish to report is of interest, owing to a rare condition of the organs of reproduction in the male. The patient, a farmer, 27 years of age, has always enjoyed good health, but since the development of puberty has been embarrassed by this rare condition. Although he is possessed of an intense sexual desire when stimulated by favorable association with the opposite sex erections are firm, persistent and complete, try as he may he has never lost one drop of semen, or experienced a sexual orgasm. The sensation that he experiences during the sexual act is that of increasing sexual desire and pleasure with the sensation of approaching ejaculation and emission, but never reaching the climax or experiencing the phenomena of the completed sexual act.

This is not a functional but an organic disorder due to an occlusion of the ejaculatory duct near the urethral orifice. The reasons for this diagnosis are the sensations during the sexual act; the sensation of approaching ejaculation and orgasm being the same as in the normal sexual act. The phenomena of ejaculation begins in the testes, and progresses along the vasa deferentia; during this he has the sensation that accompany the normal sexual act, but as the seminal fluid never escapes into the urethra, the reactory phenomena of the completed sexual act are not present. It is the reabsorption of as highly a vitalizing secretion as the seminal fluid that is responsible for the excellent condition of the patient's general health, and his persistant sexual stamina. This condition may occur as a sequela of gonorrhea, but as a congenital condition I am unable to find a single case recorded in the literature at my disposal.

MERITS THE SUPPORT OF LOYAL PHYSICIANS.

SPRINGFIELD, N. J., May 12, 1900.

THE FORTNIGHTLY PRESS CO., St. Louis, Mo.

Gentlemen:—Please find check enclosed for my subscription to your magazine. I thank you kindly for past favors, and hope you will pardon my neglect in not sending my renewal earlier.

I am pleased to note your continued success. Your journal should have a place on the desk of every loyal, level-headed physician in the East and West. The FORTNIGHTLY should have the support of every one for the stand it has taken in its noble fight against quackery.

Yours very sincerely, J A. STITES, M. D.

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Reports on Progress.

COMPRISING THE REGULAR CONTRIBUTORS OF THE FORTNIGHTLY DEPARTMENT STAFF

GENERAL SURGERY.—C. E. Black, M. D., Jacksonville, Ill.

DISEASES OF THE CHEST—W. W. Bulette, M. D., Pueblo, Colo.

INTESTINAL AND RECTAL SURGERY—S. G. Gant, M. D., New York City.

DISEASES OF THE MIND—Frank C. Hoyt, M. D.

RHINOLOGY AND LARYNGOLOGY—John A. James James, M. D.

GENITO-URINARY SURGERY AND SYPHILOLOGY — Bransford Lewis, M. D.

OPHTHALMOLOGY—J. Ellis Jennings, M. D.

ORTHOPEDIC SURGERY — Phil. Hoffman, M. D.

GYNECOLOGY—Josephine Milligan, M. D., Jacksonville, Ill.

OBSTETRICS—R. B. Murphy, M. D.

MEDICINE — Frank Parsons Norbury, M. D.

CLIMATOLOGY—Hubert Work, M. D., Pueblo, Colo.

PATHOLOGY AND BACTERIOLOGY—Rutherford Gradwohl, M. D.

PARIS CORRESPONDENT — Thomas Linn, M. D., Paris, France.

NEW YORK CORRESPONDENT — E. Franklin Smith, M. D.

LONDON CORRESPONDENT — R. T. Hewlett, M. D., M. R. C. P., Chief Bacteriological Laboratory, Jenner Institute of Preventive Medicine, London.

PEDIATRICS.

BY FRANK PARSONS NORBURY, M. D.

Formerly Resident Physician Pennsylvania Institution for Feeble-Minded Children; Formerly Assistant Physician Illinois Central Hospital for the Insane; Physician to Oak Lawn Sanitorium and Passavant Memorial Hospital; Neurologist to Our Savior's Hospital; Lecturer Psycho-Physics, Illinois College.

AND EGBERT W. FELL, B. S..

JACKSONVILLE, ILL.

The Mortality and Treatment of Acute Intussusception.—Kammerer (*Arch. of Pediatrics*, February, 1900) says that operative interference is becoming more and more popular with the profession. Of the bloodless methods the only one of value is the injection of fluids into the rectum. This is practicable only in intussusception of the large intestine. The chief objections to this method are the liability to rupture, inability to recognize that reduction has taken place, and the liability to recurrence. It should be employed only in mild, acute cases under complete anesthesia; hot water should be used. If the above treatment fails laparotomy should be resorted to. The author thinks that a lateral incision as close to the seat of trouble as possible is advisable. Reinvagination is not likely to occur, and the author does not advise fixation of the bowel. Mortality of irreducible cases is very high; of reducible cases about half as much. If reduction is impossible, either of the following procedures are available: Resection of the entire intussusception; resection of the intussusception after longitudinal incision; establishment of lateral anastomosis or an artificial anus. The first two are the most satisfactory. Kammerer says that children bear laparotomy as well as adults.

The Necessary Factors in the Treatment of Intussusception.—Gibson (*Arch. of Pediatrics*, February, 1900) limits his paper to the influence of the duration of obstruction on the prognosis and results of operation. His cases are all acute, and he finds either of the three following conditions existing, depending on the duration of the obstruction: reducible, irredu ci-

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ble or gangrenous. Combined forms may exist. If the intussusception is found in a reducible state and free from septic infection the prognosis is favorable. The mortality is very high in irreducible cases, and almost hopeless if gangrene exists.

Dr. A. Jacobi in discussing the above papers maintained that injections of water, if properly administered, gave good results. His method is as follows: Under complete chloroform anesthesia, with the hips raised, warm water should be introduced from a height not greater than twelve or eighteen inches. Gentle manipulation should be made at the same time. If the first attempt is unsuccessful it should be repeated at intervals of an hour or two for two or three times, and if still unsuccessful laparotomy should be at once performed. However, he did not think that early operation was justifiable in all cases.

A Study of Lesions of the Liver in Young Children.—(Freeman, *Archives of Pediatrics*, February, 1900.)—This paper may be summarized as follows: 1. Descent of the liver below the crest of the ilium is not rare in infants, particularly if the liver is enlarged. 2. Fatty degeneration was found in 41 per cent of all cases examined. 3. The absence of fat in general and wasting of tissue seems to have no connection with the fatty condition of the liver, the condition of nutrition in the cases of fatty liver averaging as good as the others. 4. Fatty liver really occurs in tuberculosis, marasmus, malnutrition, rachitis or syphilis, unless complicated by an acute disease. 5. Fatty livers occur most often after infections and gastro-intestinal diseases. 6. The author's two cases of cirrhosis ran an acute course. The livers showed a hyperplasia of the so-called new-found bile ducts. 7. Local necrosis may occur in measles.

A Clinical Lecture.—(A. Jacobi, *Arch. of Pediatrics*, January, 1900.) Scarlet Fever.—Negro baby with hands and arms peeling; eruption occurred three weeks previously and desquamation began at the end of the next week. Contagion is possible from the beginning of the eruption. A second desquamation sometimes occurs, during which the patient should be isolated. Frequent bathing and use of a bland ointment lessens the liability of contagion. The urine shows albumin in the second week. A bad nephritis sometimes shows little albumin, and may originate as late as the eighth week. Bedner's Aphthæ.—Sore surfaces under the tongue, on the palate and alveolar ridge. The mucous membrane of a baby's mouth is very tender, and any injury may cause ulceration, giving an easy ingress to bacteria. Tuberculosis may be produced in this way. Rough scrubbing may cause the injury. A weak solution of chlorate of potassium gently applied will give relief. Geographic Tongue.—Large and small red spots on the tongue caused by swelling of the papillæ filiformes. These are surrounded by more or less regular branching and interlacing raised lines. The condition is sometimes congenital and persistent, is of itself harmless, but may permit microbic invasion. Treatment is of little use. Meningocele and dermoid on the median line just below the lambdoid suture. Incision may result in opening the meningocele, and the operation should be delayed until the bones unite and separate it from the cranial cavity.

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Society Proceedings.

BRAINARD DISTRICT MEDICAL SOCIETY.

[CONTINUED FROM PAGE 514.]

DR. RYAN showed a series of interesting specimens with brief history of the cases. (1) Gall-stones. Woman had had attacks of gastralgia for four or five years, no jaundice, a tumor visible near the liver. Operation. The gall bladder could not be brought into the wound, so adhesions were allowed to form for forty-eight hours, and then the bladder was opened through the liver; 986 stones were removed. The lady made a good recovery and remains in good health. (2) Repeated attacks of pain and jaundice, with final discharge of gall-stones through the bowels. From their size they could not have passed through the duct, and doubtless escaped through a perforation following adhesion between the bladder and the bowel. (3) The stone was found lodged in the common duct, and was forced through into the bowel by injecting water into the cystic and common ducts. (4) When operation was done the patient had a pulse of 140 and temperature 104. A good recovery followed. (5) Vesical calculus. A child had pain and fever, and could not urinate. The calculus was found in the urethra and was removed from above. Patient recovered. (6) Man, had severe pain due to a "stricture." It was impossible to pass a catheter by an obstruction which could be felt externally as a stone. By careful manipulation it was worked down to the meatus which was unusually narrow and had to be incised before the calculus could pass. (7) Appendicitis. Girl of eleven years. On Sunday she felt severe pain. Tuesday noon operation was performed; the appendix with a concretion was removed. Recovery. (8) Boy. Appendix found constricted and gangrenous half its length. Recovery. (9) Boy. Had suffered three days with "stomach ache." On operating found pus and general peritonitis. Died in forty-eight hours. Beware of these attacks of "old fashioned belly-ache." They may prove fatal. (10) Man. Circumscribed abscess. Appendix with concretion removed. Recovery. (11) This case had been called "malarial fever" for four weeks. The appendix lay in a large abscess. Recovery. (12) Boy of 14. Pulse quick, temperature 102°. Next morning the operation was performed. No pus was found and a prompt recovery occurred. (13) Man, similar to case 12. (14) This was a case of so-called appendicitis obliterans.

In circumscribed abscesses do not hunt for the appendix if it does not appear in the wound. There is too much danger of breaking down the protective adhesions. Examination by rectum is often helpful in diagnosis. Dr. Ryan also showed a diagram of the common locations of the appendicitis abscess.

DR. KREIDER, by consent of the Society, spoke of the work of the State Society, urging all members of this Society to unite with it and to give their aid in making the *Journal* as valuable as possible to the profession, especially by reporting local happenings among the profession, removals, etc. Discussion of Dr. Ryan's report followed.

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DR. BLACK.—The lack of a prompt and positive diagnosis with consequent delay in decision as to treatment is the point to be emphasized and deplored. All the cases of early operation that I have seen, before general infection, recovered. The general practitioner sees these cases and virtually decides the time of operation. The surgeon is at his service and has no voice in the decision as a rule, but must simply do what he can when called, often too late to do anything. If a person has a pain in the abdomen without discoverable cause, be on the safe side and call it appendicitis.

DR. KREIDER has seen one person who had had five attacks of "typhoid fever"! It was appendicitis. Where there are repeated attacks of biliousness or indigestion look out for this trouble.

DR. COPPEL.—While in some cases the diagnosis is difficult, in most cases a careful consideration of the symptoms and history will make it clear. Most cases which I have had have been operated from four to seven days after the onset of the disease. Patients and friends always ask, must you operate? I explain the conditions and advise prompt operation. If they decline they must take their chances. While 60 per cent to 85 per cent get well a large number of these relapse after a time. It is like sitting over a powder keg to go without operation. Two of my cases were puzzling. One was referred to a surgeon for operation, but the uncertainty led to further delay. Finally incision just above the pubis opened the abscess. Recovery followed. (2) The trouble was very low down and the man had marked bladder symptoms. Early in the morning of the day he was to be taken to the hospital a tumor appeared like a distended bladder. It was not reduced by catheterization, however. The incision was close to the pubis and plenty of pus appeared. This was the only fatal case in my practice.

DR. WHITLEY.—Good authorities say operation is required in 1 case in 20. I am often in doubt for forty-eight hours. Like other inflammations this will take about a week to show its character. If fever subsides at this time look for resolution, but if it raises again look out for most serious condition. I have seen successful operations on the seventh, ninth and tenth days. Cases of perityphlitis sometimes recover partly, but continue far from well. Two cases I have known died, refusing operation, from a second attack.

Most of the gall stones shown might have passed through the natural passages. Most of the jaundice is caused by catarrhal conditions. Searching for a remedy that would dissolve the stones I found they simply vanished when chloroform was applied, and though I did not suppose that the drug could reach the stones in the gall bladder I gave twenty drops of a ten per cent solution of chloroform in alcohol after each meal and have found it very useful in these cases, securing apparent cure in some protracted oues.

DR. HOLMES.—Cases of typhlitis sometimes opened into the bowels and recovery followed. Is there apt to be any difficulty in the diagnosis between appendicitis and floating kidney? In the case of a young lady with

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floating kidney taken to Chicago for operation, Dr. Quine advised against operation. What is the opinion of the surgeons on such cases?

DR. BLACK would not operate unless patient is seriously affected by the state of the kidney. In cases of appendicitis the patient will acknowledge that at some time there was a small spot more painful than elsewhere. Ask him to locate this, and it will uniformly be found close to McBurney's point.

On motion, Society adjourned leaving all arrangements for the October meeting to the Committee on Program.

KATHERINE MILLER, Secretary.

Protective Dressing.—An excellent firm dressing for varicose veins, ulcers, etc., is made as follows:

℞ Glycerini.....
Zinci oxidi.....
Gelatine (white).....aa part j
Water..... parts iij

M. Heat in water bath. Sig.: Apply several coats with brush.—MONTGOMERY.

Thiol, salicylic acid, etc., may be added.—*Medical Standard.*

Comedones.—The following is a useful application for cases of this kind:

℞ Sulphuric ether..... ℥ i
Ammon. carb..... ℥ i
Acid boric..... gr. xx
Aq.....q. s. ut ft ℥ ii

Enteralgia.—

℞ Spir. ammoniæ aromatici.....
Spir. chloroformi.....aa ℥ j
Spir. camphoræ..... ℥ ij
Tinct. hyoscyami..... ℥ iv
Ext. cannabis indicæ fl..... ℥ j
Tinct. cardamomi comp., q. s. ad..... ℥ vi

M. Sig.: Two teaspoonfuls in water every hour or two until pain is allayed.

In cases of enteralgia associated with hysteria, the following is beneficial:

℞ Liq. potassii arsenitis..... ℥ ss
Tinct. belladonnæ fol..... ℥ ij
Potassii bromidi..... ℥ v
Syr..... ℥ iv
Aq., q. s. ad..... ℥ viij

M. Sig.: Tablespoonful three times a day, two hours after meals.—*Jour. Am. Med. Asso.*

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PRACTICAL THERAPEUTICS.

URIC ACID AND ITS ELIMINATION. — Investigation strengthens the belief that eating too much meat is responsible for the formation of uric acid in disease-producing quantities. To dispose of meat satisfactorily gastric digestion must be active, the constitution well supplied with fluids, and the organs more or less actively engaged in growth and development. These conditions cease to exist when adult life is reached, and the requirements of th constitution are chiefly for food to supply energy, heat and vital stimulus. At this period in life a small amount of meat or other albuminous food will suffice, especially in torpid systems or persons of sedentary habits. The symptoms caused by an excess of uric acid depend upon the degree of saturation and whether these morbid products are circulating in the blood or are precipitated in the tissues or joints. The susceptibility of the various organs and the constitution of the individual also help to determine the symptoms; one person may have asthma, another an irritable bladder, and another sick headache or rheumatism. In the treatment diet is highly important. Meat once a day is often enough. Fresh fruit, especially apples, should be eaten in abundance. Tomatoes are excellent, so is asparagus. Baked bananas and well-done rice are excellent substitutes for meat. Pure honey is always allowable. In uncomplicated cases lithiated hydrangea will be the only remedy needed in addition to dietetic reform and plenty of water.

INTESTINAL CATARRHS OF CHILDREN—Dr. Carl Tittel, of Vienna, (Ga. Journal of Medicine and Surgery, April, 1900) calls attention to the fact that the majority of the remedies which have been claimed to act directly upon the inflamed intestinal mucous membrane are objectionable, becauuse of their irritating action upon the stomach, and because their effect becomes rapidly exhausted, sometimes even in the upper portion of the intestine. Recently he has resorted to tannopine which he found free from these disadvantages, and has employed it in a large number of intestinal affections in children, comprising both enteritis due to simple dyspepsia and also intestinal catrrhs of other origin. It was usually prescribed by him without any admixture of other remedies in doses of two to seven grains according to the age of the child, being given dry on the tongue, or in suspension. As no radical changes were made in the diet in any of these cases the beneficial results are chiefly attributable to the use of tannopine. Under its administration the stools were diminished in number and became more consistent, and the admixture of mucus gradually decreased. Milder cases were improved or cured after two to three days' treatment. In those instances where on account of the conditions of the patient and the long duration of the disease preliminary disinfection of the bowel by means of calomel could not be employed, the administration of tannopine was very serviceable in two directions of both as an astringent and disinfectant.

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NEURASTHENIA AND GENITAL DISEASE—Since the first accurate description of neurasthenia by Dr. Beard this disease has been made the subject of numerous careful clinical studies, especially in America where it seems most prevalent.

It has been found that this condition may be due to a variety of causes, and it becomes necessary therefore to determine the exact etiological factor in every case in order to adopt a successful line of treatment. In a very important group of cases in women the chief exciting cause is disease of the generative organs, the neurasthenic symptoms being dependent upon reflex disturbance of the central nervous system due to the local irritation The treatment of this class of patients must, of course, be particularly directed toward the removal of the local trouble, in connection with the employment of such hygienic regulations and internal remedies as will improve the state of the nervous system.

Among the topical measures for the removal of irritation, congestion, and inflammation of the genital organs, Micajah's Medicated Uterine Wafers are especially adapted for this class of cases. These patients are apt to be made worse by severe operative procedures. On the other hand, as the wafers are easily applied, unirritating and cleanly patients do not object to them, and their use is promptly followed by relief of the local symptoms, and, in many instances by a permanent cure, without the necessity of surgical intervention.

THE WORLD'S GREATEST NATURAL SANITARIUM.—For those suffering from pulmonary diseases, rheumatism, catarrh and kindred ills, there is no climate that operates so quickly to the relief of the suffer as that of Salt Lake City and the Great Salt Basin—a combination of salt sea air and mountain ozone. Salt Lake City is one of the most quaint and picturesque places in America, and is justly entitled to its claim of being the World's Greatest Natural Sanitarium on account of its equable climate, its salt lake, its hot and warm sulphur springs and other health restoring features. A bath in Great Salt Lake is very invigorating. One can float on the bosom of the waters with exhilaration and perfect content. Then the Great Mormon Temple, Tabernacle and Church Institutions, likewise the parks, drives, canons, and nearby mountain and lake resorts add very materially to the pleasures of a visit to the "City of the Saints." The trip from Denver or Colorado Springs to Salt Lake City via the Rio Grande Western Ry. in connection with either the Denver & Rio Grande or Colorado Midland R. R. is the grandest on the continent. No other trip can compare with it in scenic effects or novel interest. Apply to Geo. W. Heintz, General Passenger Agent, Salt Lake City, for literature.

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The Medical Fortnightly.

Issued Tenth and Twenty-fifth of Every Month by the Fortnightly Press Co.

UNDER THE EDITORIAL DIRECTION OF

FRANK PARSONS NORBURY, M. D. AND THOS. A. HOPKINS, M. D.

Secretary: CHARLES WOOD FASSETT, M. D.

A COSMOPOLITAN BIWEEKLY FOR THE GENERAL PRACTITIONER

Editorial Offices in St. Louis, Chicago, Cincinnati, Jacksonville, St. Joseph, Kansas City, and Pueblo, where specimen copies may be obtained and subscriptions will be taken.

Address all business communications to the Fortnightly Press Company.

Address all contributions and books for review to the Editors, Suite 312, Century Building, Saint Louis.

Paris: U. S. Press Building, Espanade des Invalides, Paris Exposition.

Volume XVIII SEPTEMBER TWENTY-FIFTH Number 6

Editorial Department.

An Advance in Anesthesia.

THE close of this century which gave birth to the use of anesthetics in surgery, thus making possible the great surgical procedures of today, has witnessed another great step in advance, a step which bids fair to add further possibilities to surgery, and remove or ameliorate at least one of the greatest dangers of surgery, that of anesthesia. Dr. J. B. Murphy, of Chicago, on his return from the International Medical Congress has put into practice this method of spinal cord anesthesia. In the recent number (September) of the *Chicago Clinic* Dr. Murphy says:

Originality in this method belongs to an American, Dr. J. Leonard Corning, but Tuffier has done more to advance it as a practical method than any other man. Dr. Murphy claims as advantages of this method: Its ease of application; thorough analgesia of all tissues below the diaphragm; the retention of the sense of touch; the absence of reflexes; the consciousness of the patient; the absence of cardiac, pulmonary and renal complications.

Tuffier has used the anesthetic in 103 cases, and has not had a fatality, complication or unpleasantness in any of them. His method is as follows: Pravaz's syringe is used, with a platinum needle nine centimeters long, external diameter 1.1 mm., internal diameter .8 mm., the end to have a short bevel. A 2 per cent recent and sterile solution of cocain is used. The patient is in a sitting posture, both arms carried forward. A line drawn between the iliac crests passes through the fourth lumbar vertebra. Locate its spinous process with the left index finger, tell the patient to bend forward, insert the needle to the right of the vertebral column, about 1 cm. from the line of the spinous process. As soon as the needle is in the subarachnoid space the cerebro-spinal fluid will escape drop by drop. The syringe containing 1 c.c. of a 2 per cent solution of cocain is then attached and the injection made slowly, being completed in one minute. In from four to ten minutes the patient will complain of a tingling sensation and numbness of the feet, which extends up the legs. You can now begin to operate. Sensation to pain and heat disappears; contact sensation per-

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sists; toward the last the motor system may be affected. The duration of the analgesia is from one to one and one-half hours. The patient may be put into the position most convenient for the operation. Accidents noticed are vomiting and headache very frequently, profuse sweats, dilatation of the pupils, shaking of the limbs, and rapidity of the pulse. There is sometimes an evening elevation of temperature on the day of the operation, but this and all the unpleasant symptoms disappear within twenty-four hours. Since August 19th Dr. Murphy has used this method nine times.

CASE I.—Left pyosalpinx; fifteen minims of 2 per cent solution were used, and operation begun in eight minutes. There was no pain; vomited six times during the operation, but not after operation. Evening temperature 102; since then it has been normal, and no other unpleasant symptoms have occurred. Pulse at no time was above 75 per minute.

CASE II.—Varicose veins of the leg; Schede's operation. Thirteen minims of a two per cent solution were used. Anesthesia was complete in seven minutes. Some vomiting during the operation. Pulse not accelerated, and strong during the entire time of operation.

CASE III.—Ulcerated stump following amputation for diabetic gangrene. Solution of eucaine was used; anesthesia in twelve minutes; some return of sensation ten minutes after. Not as satisfactory as cocaine.

CASE IV.—Small tumor of left ovary. Injections of eleven minims of a two per cent solution of cocaine. Analgesia in nine minutes. Some nausea and one effort at vomiting. Pulse 120 before the operation, 90 before it was completed.

CASE V.—Appendectomy. Fifteen minims of a two per cent solution of cocain were used; analgesia in nine minutes. Pulse before operation 150; during operation 140; one effort at vomiting; complete analgesia in ten minutes; evening temperature 99.

CASE VI.—Arthrectomy left knee joint. Fifteen minims of a one and one-half per cent solution of cocaine were used. Analgesia in eleven minutes. Nausea, vomited twice; pulse 140; evening temperature 99.6.

CASE VII.—Suppurative epididymitis curettement. Twelve minims of a one and one-half per cent solution being used, analgesia occurred in seven minutes. Nausea, vomited once. Pulse rapid; evening temperature 100.6.

CASE VIII.—Varicose ulcer of leg. Injected fifteen minims of a one and one-half per cent solution of cocaine; analgesia in seven minutes. Nausea, vomited once. Pulse rapid; evening temperature 99.4.

CASE IX.—Strangulated femoral hernia. Injected fifteen minims of a one and one-half per cent solution of cocaine. Analgesia in eight minutes. Pulse 130 before injection, 120 at end of operation and fairly strong during the whole time.

In none of these cases was the quality of the pulse depreciated. Unpleasant after-effects did not occur.

DR. T. A. HOPKINS is home from his vacation, which was pleasantly spent in Colorado, Salt Lake City and at the Pacific Coast.

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The Lightning Pains of Locomotor Ataxia.

THE pains of locomotor ataxia are frequently the first warning of the approaching disaster. Their appearance is not at first understood, inasmuch as they may precede other symptoms of the disease. However, to the close clinical observer some evidences of the disease may be recognized, such as slight incoördination, or analgesia of the lower extremities, ocular disturbances, or prolonged painful sensation following a bruise or pin prick.

The lancinating pains, however, usually define tabes, and as the disease progresses they become more or less a distressing feature of the disease. Rare, indeed, is it for a patient to escape these pains, although some suffer more than others. These pains somewhat resemble those of neuralgia, "being groups of single pains," which are intermittent in character, sometimes lasting at intervals all day or night, or just for a short time and localized in some spot.

The heel is a favorite spot, also the great or little toe, or some spot on the body may become intensely hypersensitive. Again, the pains may be bilateral or girdle in character, or deep boring sensations. They occur at irregular intervals, and some patients say they are worse during the changes of weather.

The treatment of this condition is one of the trials of the physician's life. The patient naturally appeals to his physician for relief, and just here is where the helplessness of the situation dawns upon both patient and physician.

Hot or cold applications give temporary relief in mild cases, sometimes continued cold is all that is necessary. But in the majority of cases some one of the synthetic preparations, such as phenacetin or acetanilid, are more reliable in their power to relieve these pains. Just what their action is on the nervous system is not known, but as Hare says, "We know, however, that phenacetin is a distinct nervous sedative, and it acts particularly on the spinal cord in its sensory tracts." For this reason phenacetin and acetanilid are chosen to relieve these lightning pains of locomotor ataxia. When given in small doses they exert no bad effect upon the circulation, and no untoward effect if used with judgment. As Lepine has shown, almost every nerve pain is benefited, if not relieved by these drugs. In securing this pain-relieving power it is best to combine these drugs in one prescription, and that in a liquid form is more readily absorbed and more easily dispensed by the general practitioner. The following is an excellent prescription indicated in these lightning pains and crises of ataxia. It is put up in liquid form by The Tilden Co., of New Lebanon, N. Y., and St. Louis. The formula is as follows, each fluid drachm contains:

℞ Phenacetin ..... 1 gr.
Citrate caffein ..... ½ gr.
Salol ..... ½ gr.
Acetanilid ..... 1¼ gr.
Tartaric acid ..... ¼ gr.
Bicarb. soda ..... 1½ gr.

It should be given every hour at least until relief is given.

F. P. N.

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LONDON LETTER.

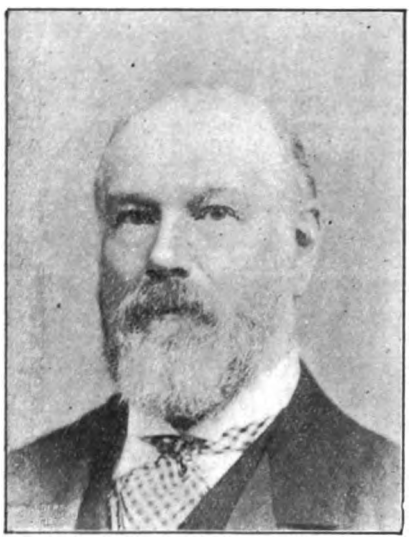
[SPECIAL CORRESPONDENCE.]

THE MEETING OF THE BRITISH MEDICAL ASSOCIATION.

This year the British Medical Association meeting was held at Ipswich, the proceedings opening with the usual service on Tuesday morning, July 31st. This is the first meeting of the association which has been held at Ipswich, a town which though not possessing the natural beauties of Edinburgh, or the naval and military importance of Portsmouth, has nevertheless peculiar interests of its own. It was the birthplace of Cardinal Wolsey, it is an ancient town with narrow streets, in which are some important examples of ancient architecture.

The President of the meeting this year was Dr. Elliston, senior surgeon to the East Suffolk and Ipswich Hospital. His presidential address was entitled "Some Incidents in the Evolution of the Modern Physician," and in a brief manner he sketched the history of the rise and progress of modern medicine.

Dr. Pye Smith delivered the address in Medicine, entitled "Medicine as a Science and Medicine as an Art." He pointed out the importance of keeping to the *via media* and avoiding extremes, instancing as examples the cases of bloodletting and of the misuse of mercury. He said, "I see many patients suffering from idleness, but few or more suffering from hard work. "Nerve prostration" from "worry" and "brain-tension" generally proves to be a decent veil to the effects of gambling and drink." Experiment in medicine is a necessity and experiments on animals necessary for progress.



DR. PYE SMITH.
Address in Medicine.

Mr. Frederick Treves delivered the address in Surgery, taking for his subject "The Surgeon in the Nineteenth Century."

In the Section of Medicine, presided over by Dr. Buzzard, there was a discussion on "Influenza as it Affects the Nervous System," introduced by Dr. Bury, of Manchester. He divided the disease into four types: (1) affecting the mucous membranes; (2) gastro-intestinal; (3) cardiac, and (4) when the nervous system is exclusively at-

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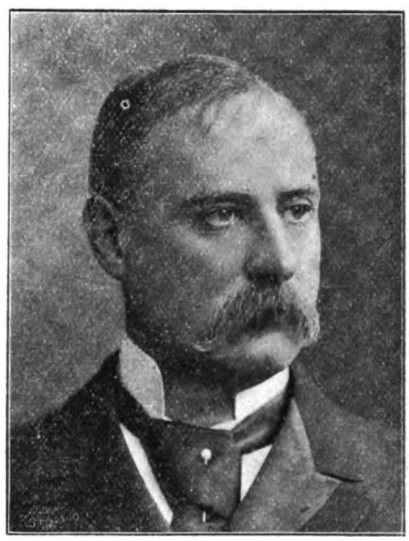
tacked. He recognized two chief groups of nervous affections, the immediate, such as coma, delirium and encephalitis, the more remote neurasthenia, neuralgia and paralysis. Sir William Broadbent considered that most of of the neurasthenic, neuralgic and neuritic cases were due to toxins, but that the comatose cases were due directly to the bacilli blocking the cerebral capillaries. Five cases of sudden coma, due to influenza, were mentioned, and allusion was made to a case with unilateral convulsions, to another with gradual hemiplegia with muscular spasm, and to a third which died from paralysis of the respiratory muscles. Sir Peter Eade thought that the toxic influence of influenza was exerted more on the sensory than on the motor mechanisms, and most on the medulla. One or two speakers alluded to the onset of diabetes after influenza. Dr. St. Clair Thomson mentioned the anosmia, pharyngeal hyperesthesia and laryngeal paralysis occurring after influenza. Dr. Buzzard distinguished between those diseases which were caused by, and those diseases which were merely revealed by, influenza. Thus he had seen cases of tabes and of bulbar paralysis come on after influenza. He compared the bizarre manifestations of the toxemic process in syphilis and epidemic infantile paralysis with the symptoms of influenza, and described some most complex cases of the disease, *e. g.*, symptoms of of spastic paralysis conjoined with multiple neuritis.



MR. FREDERICK TREVES.
Address in Surgery.

Mr. Howard Marsh presided over the Section of Surgery. A discussion on Subphrenic Abscess was introduced by Mr. Godlee, who drew attention to the various causes of the condition, including gastric ulcer and appendicitis, and mentioned that in the last five years he had seen no fewer than thirteen cases due to actinomycosis. The many and varying symptoms of the disease were discussed, and it was agreed that the characters of the aspirated pus did not enable the surgeon to decide whether it had been let out from above or below the diaphragm.

Mr. Bidwell narrated a series of successful cases of pyloroplasty for non-malignant conditions of the stomach, illustrating the slight risk of the operation. Prof. Berg (Stockholm) had found retraction of the stricture recur in 50 per cent of his cases, and had been compelled to do gastro-enterostomy; he urged that at least three years must elapse before the cases could be considered cured.

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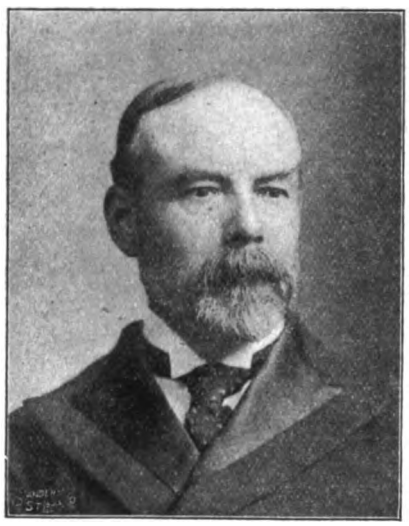
Mr. Wallis discussed the causes and treatment of non-malignant stricture of the rectum, urging that septic infection was the cause in many cases. Mr. Treves stated his belief that many cases of stricture of the rectum and gastro-intestinal tract were due to congenital abnormality.

Mr. Stanley Boyd brought forward the latest results of oöphorectomy in cases of scirrhus of the breast. From these apparently 40 per cent of the patients were benefited. He himself did not attach much importance to thyroid feeding, but Dr. Herman urged that the combined treatment gave the best results. Mr. Boyd considered the operation practically useless after the menopause, and that it was still in the experimental stage. Full details were given of 38 cases, in 17 of which it was considered improvement had resulted.

In the Section of Obstetrics and Gynecology, of which Dr. W. S. A. Griffiths was President, the important subject for discussion was the "Notification of Puerperal Fever." Dr. Berry Hart remarked that in spite of all our progress in antisepsis and the management of labor, the mortality from puerperal fever had not materally diminished, and it was unanimously resolved that notification of puerperal fever should be adopted generally.



MR. HOWARD MARSH,
President Section of Surgery.

Dr. Thresh in his presidential address in the "Section of State Medicine," dealt with certain problems in rural hygiene. One of the most difficult problems of the time was the depopulation of the agricultural districts and a corresponding increase in the size of the towns. One of the reasons of this condition was undoubtedly greater attention paid by the town authorities to sanitary problems and to providing adequate housing. Country cottages should have land and water supply, and above all, an act was wanted which would encourage sanitary authorities to build, and offer them every facility for providing decent accommodation for the laborer with the least possible trouble and at the lowest possible cost.

Dr. Nathan Raw introduced a discussion upon late supported sanatoria for consumptives. He described what had been done in Liverpool, and felt sure that in a few years sanatoria would have to be provided at the expense of the State, since no one with phthisis would be able to get employment. Dr. Cooper Pattin said that in Norwich gratuitous disinfection

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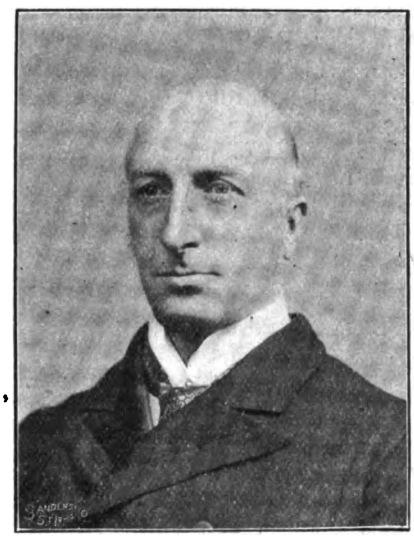
had had a great influence upon the spread of the disease. Dr. Oldfield thought that the first duty was to teach the people the value of fresh air and cleanliness. Dr. Groves pointed out that the residents in sanatoria being merely temporary the great value of these institutions lay in their educational value.

In the Section of Pathology Dr. Klein, the President, gave an address on "Bacteriology in Relation to Pathology," in which he showed the important role of microbes and their toxins in the production of inflammation and of necrosis, and on the specificity of cell secretion.

Dr. Andrews introduced a discussion on the "Pathological Distribution of the Diphtheria Bacillus and the Bacteriological Diagnosis of Bacterial Infections." It was unanimously felt by the speakers that the physician ought not to expect anything more than a relatively probable diagnosis from a simple morphological examination of a cultivation twenty-four hours old.

In the Section of Ophthalmology the first discussion was opened by Mr. Richardson Cross, on the "Treatment of Chronic Glaucoma." He thought that sclerotomy was a most useful operation, and expressed himself strongly in favor of early operation. Mr. Work Dodd stated that he had recently removed the upper cervical ganglion of the sympathetics on both sides, and the immediate result was contraction of the pupil and diminution of the tension.



DR. FREDERIC TAYLOR,
President Section Diseases of Children.

In the Section of Pharmacology and Therapeutics, Dr. Walter Smith, the President, opened a discussion on the Treatment of Internal Hemorrhage. Patients did not often die from immediate hemorrhage of the lungs, bowels or kidney. Gallic acid was devoid of local styptic power, and tannic acid was of no use as a remote hemostatic. The most rational treatment of say, a serious case of hemoptysis was rest, morphine, and free evacuation of the bowels. Dr. Dixon had found supra-renal extract of some use as tablet, but not in solution. He had not been able to confirm the value of calcium salts.

In the Section of Laryngology and Otology, the Intra-nasal Treatment of Ear Disease formed the subject of a discussion.

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In the Section of Tropical Diseases there was a long discussion on the "Action and Modes of Employment of Quinine in Malaria," and another on the Etiology of Filariasis, in which Lieutenant-Colonel Maitland contended that the discovery of the filarial worm passing along the proboscis of the mosquito was not conclusive proof that the old idea of infection by water was wrong. RICHARD T. HEWLETT.

DR. ARCHIBALD CHURCH, one of our collaborators, has been recently appointed Professor of Nervous and Mental Diseases in Northwestern University Medical School and head of the Neurological Department. We congratulate the Northwestern University in their recognition of the meritorious work done by Dr. Church in the field of Neurology.

DR. JOHN B. MURPHY has accepted a professorship in Surgery and Clinical Surgery in the Northwestern University Medical School. Dr. Murphy has been appointed Surgeon-in-chief of Mercy Hospital with the direction of the surgical teaching in that hospital, and will give two clinics there each week. The hospitul now contains 260 beds, with abundance of clinical material. A new amphitheatre with a seating capacity of 300 is in progress of construction.

THE twelfth annual meeting of the Tri-State Medical Society of Alabama, Georgia and Tennessee will be held in Chattanooga, Thursday, Friday and Saturday, October 11, 12 and 13, 1900. Visitors can get a rate of one fare for the round trip by asking for tickets to the re-union of the Army of the Cumberland and the Spanish-American War Veterans, which will be on sale during the whole week. Those desiring to read papers should send titles to the Secretary, Dr. Frank Trester Smith, Chattanooga, Tenn.

NEW BOOKS IN PRESS.

THE TREATMENT OF FRACTURES. By W. L. ESTES, A.M., M.D., Director and Physician and Surgeon-in-chief St. Luke's Hospital, South Bethlehem, Pa.

THIS book describes the treatment of fractures in a practical and interesting manner and is replete with original drawing, photographs and skiagraphs. Printed upon heavy book paper and substantially bound in cloth, containing 250 pages. Price $2.00.

THE TECHNIQUE OF SURGICAL GYNECOLOGY. By AUGUSTIN H. GOELET, M.D., Professor of Gynecology in the New York School of Clinical Medicine; Consulting Professor of Gynecological Electro-Therapeutics, International Correspondence Schools, Scranton, Pa., etc.

THIS book presents to the reader the technique of gynecological operations in a manner combining simplicity with completeness. The various subjects are individually discussed and graphically illustrated with a large number of drawings and sketches especially prepared. About 300 pages, same price as above. These two works are thoroughly practical and all details are carefully elaborated. Every general practitioner should possess a copy of each. Ready for delivery about September 25th. Published by the International Journal of Surgery Co., Medical Publisher, 100 William St., New York.

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Report on the Remote Results of Sanguinary Intervention (Interventions Sanglantes) in Urethrostenosis.

BY MR. REGINALD HARRISON,

LONDON.

Fellow and Hunterian Professor of Surgery (1891), Royal College of Surgeons of England; Surgeon to St. Peter's Hospital.

Read before the Thirteenth International Congress, Paris, August, 1900.

I HAVE been asked to report to this Congress on the remote effects of structural lesions (*interventions sanglantes*) employed in the treatment stricture of the urethra.

I think it will be generally admitted that these results are mainly determined by the nature of the wound and the circumstances under which it healed. For instance, incised and contused wounds, and wounds that heal without any or with much inflammation, or with little or no provision for drainage, may be expected to yield different results. For this happens in all parts of the body.

But in estimating the results of structural lesions of the urethra we must never lose sight of the fact, that this canal conveys for several inches, at varying intervals, a compound and complex fluid which under certain conditions, not very clearly defined, is capable of exercising a highly poisonous effect on the tissues and fluids of the body with which it may accidentally come in contact. This is evidenced by the frequency of rigors and fever not unlike a malaria, after slight lesions, such as passing a catheter or dividing a stricture, by the sudden suppression of urine which is sometimes similarly occasioned, by the happening of serious if not fatal

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septicemia later on, and more remotely by the formation of a contractile scar at and about the seat of the wound. Surely we may say that the pathology of the urethra is a unique one.

To compare their results it will be necessary to define with some accuracy the kinds of wound that preceded and their probable process of healing. For the purpose of this report the following varieties have been examined and carefully studied, both during life, and as opportunity offered, after death:

1. Lacerated or contused wounds as follow such methods of divulsion as were practised by Perréve* in Paris, and Holt† in London.

2. Incised wounds from within the urethra, as illustrated by Maisonneuve's‡ and other kinds of internal urethrotomy.

3. Incised wounds from without inwards as described by Syme,§ of Edinburgh, under the name of external urethrotomy or perineal section.

1. Wounds inflicted by instruments for rapidly causing divulsion or rupture of a stricture are usually of a contused or lacerated character. When thus employed, unless the stricture is an annular or a ring-like one, a condition which is rare, the canal usually gives way at a point in its circumference where the resistance is least, and this is naturally not the densest portion of the contraction. Hence these operation wounds heal not unlike accidental lacerations of the urethra from injury, and in both instances, the liability to stricture and to its recurrence, is considerable. This was found to be so in cases examined both during life and after death; and repeated operations by divulsion appear to have been followed by additions to the amount of contractile scar-tissues at or about the seat of stricture.

There is, however, a form of stricture where divulsion is not open to these objections as judged by its more remote effects. Reference is here made to what are known as peri-urethral or sub-mucous strictures. My attention was first called to them some years ago by examining a patient who died from some other cause shortly after (within a week) a tight stricture in the deep urethra had been divulsed by Holt's method. The stricture was found to be peri-urethral, and thus compressed the mucous coat as a ligature around it would do. The effects of the divulsion had been to rupture the fibres of the stricture whilst it left the mucous lining almost intact. Mr. Christopher Heath‖ has also recorded a similar observation.

I am inclined to think that it was in its casual application to this class of cases and the excellent results, that Holt's operation attained a position relative to the treatment of strictures generally which it hardly appears to have merited.

No better result relative to the permanency of the cure can be desired than this, and if it were possible to limit divulsion to peri-urethral strictures I believe this operation would still be frequently employed. I have

*Traite des retrecissements organiques de l'uretre. Emploi methodique des dilateurs mecaniques dans le traitement de ces Maladies. Paris, 1848.
† On the Immediate Treatment of Stricture. London, 1861.
‡ L'Urethrotomie Interne. Paris, 1879.
§ On the Treatment of Strictures by External Incision. 1851.
‖ Brit. Med. Journal. July 17, 1869.

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examined several urethras many years after Holt's operation had been performed where the canal had maintained its full measurements, and no trace of a lesion of the mucous membrane could be found. We may claim these as instances of the successful treatment of stricture by subcutaneous, or rather, submucous, methods.

2. The remote effects following internal urethrotomy are of a variable character arising mainly from the nature of the cicatrix or scar-tissue that follows the operation. In some instances I found from examination after death several years afterwards, that no signs of the original stricture were discoverable, either in the mucous membrane itself or the submucosa. As far as I could ascertain the incision made by the urethrotome had healed without leaving any mark or contraction.

As illustrating this class of cases I will select one that has recently come under my observation where the previous history was well authenticated throughout. It was that of a man aged 53, whom I saw in February, 1900. He was operated upon in 1885 by the late Mr. Berkeley Hill for a stricture in the deep urethra, which would only then admit a filiform bougie. Internal urethrotomy was performed. I saw and examined this patient with Mr. Lockwood, who had been personally acquainted with him throughout. I could find no evidence of stricture. The patient had ceased to use a bougie for some years. There could be no question that this man had been permanently cured by the operation.

On the other hand, the majority of instances examined showed that a tendency to relapse occurred within a few weeks or months after the operation in varying degrees, even where patients had endeavored to prevent this by the use of a bougie. In these, for the most part, there were signs that the wound inflicted had probably been an irregular or jagged one, more resembling a lacerated wound than an incised one, and not what would be expected from a well-constructed urethrotome. Further, the resulting cicatrix often presented an appearance not unlike what happens after a burn of the second or third degree, or as I have seen following electrolysis for stricture.

In some instances of recurrence after internal urethrotomy it was apparent that this operation had only partly divided the stricture. From the evidence that was afforded by this class of cases it was concluded that the combination of partial incision of a stricture by internal urethrotomy, followed immediately by stretching of the wound thus made by divulsion or bougies, did not yield good permanent results. It was in some of these cases that recurrence took place most speedily and in an aggravated form.

3. The third group of cases examined were those in which the stricture was divided from without inwards on a grooved staff in accordance with Syme's description of external urethrotomy or perineal section. In several instances where this operation had been practiced some years previously I found no recurrence had occurred, though the use of the bougie had practically been discontinued.

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I have recorded* a case where a patient, aged 46, had been operated upon by external urethrotomy for stricture and urinary fistula by a former colleague of mine in 1867. He died eighteen years afterwards, and on examining his urethra I could find no sign of stricture. The dimensions of the canal along the line where the section had been made were larger than the rest. The patient had not been in the habit of using a bougie since the operation.

It will not be necessary to further illustrate the permanent advantages that have followed perineal section in some cases of urethral stricture. In restoring and preserving the normal dimensions of the canal, and in rendering catheterism easy where previously it was difficult, its advantages must be apparent in cases to which it is applicable, and these include some of the worst varieties of stricture. If performed without a guide the prospect of a good result is very small.

Where practiced successfuily it was not easy to determine how much of the permanent good that resulted was due to the complete division of the stricture and how much to the drainage which the external wound provided; but it seemed probable that both contributed to this end.

Taken as a whole, these investigations support a conclusion, that most strictures treated in the three ways referred to, showed a tendency to re-contraction, in varying degrees. In some this liability was counteracted by the use of bougies after the operation, though practically it could not be said there was any time limit to this expedient. In others the tendency to relapse was so rapid and strong as to require repeated operations to maintain the dimensions of the canal, or even to necessitate the formation of a urinary fistula in place of the urethra.

In a few instances after rapid divulsion, internal urethrotomy, and perineal section or external urethrotomy, the evidence was conclusive that a permanent cure had resulted, and where the subsequent use of a bougie appeared precautionary, rather than necessary.

It must, however, be stated that compared with the large number of stricture cases which were investigated for this purpose, and where the observations extended over a considerable number of years under favorable circumstances for conducting such an inquiry, that instances like the last mentioned were rare. These conclusions will, I think, correspond with the experience of most surgeons.

I take it, however, that the object of this report is not merely to reiterate a foregone conclusion, but to explain, if possible, how these variations may have happened, and how both good and indifferent results may alike contribute to advance knowledge in connection with this subject.

In examining the lesions thus made for the treatment of certain forms of stricture by urethrotomy, and I include both varieties of operations under this term, it was evident that some of them had been faulty in their application, and in their construction relative to the process of healing which would follow.

In a few instances appearances indicated that the incision or incisions had not been accurately applied to the constriction, that the urethrotome

* Surgical Disorders of the Urinary Organs, 4th Ed., p. 100.

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had lacerated rather than cut, that several wounds had been made in various directions, and thus by scar-tissue the obstruction was rather added to than lessened by what had been done. This was probably directly due to faulty instruments in the case of internal urethrotomy, and to want of precision and completeness in carrying out the details of perineal section.

Though some failures may be accounted for in these ways, more were evidently due to the conditions under which healing proceeded after the operation. Many of the incisions that were made for the purposes of internal urethrotomy were inadequately provided with means for proper drainage, having regard to their extent, whilst some cases of perineal section or external urethrotomy, were hardly any better off in this respect.

About the time I commenced to make these observations on a somewhat extended scale, internal urethrotomy was being practiced with a very free hand.

The late Professor Otis, of New York, had recently formulated his views relative to the male urethra, which to some extent were responsible for this. Though fully recognizing the value of his work in demonstrating the greater capacity of the male urethra and the important influence this had on the new lithotrity or litholapaxy which Bigelow was developing in the wake of Otis's investigations, I could not follow him in the practical application of it, in its entirety, to the treatment of stricture. However, it tended in the direction of increasing the ranging of internal urethrotomy as well as the size of the wounds thus made, but I cannot say that it proportionately added to the number of cures in chronic stricture of the deep urethra..

It struck me in examining cases which had thus been operated on some years previously by various surgeons where the stricture had recurred, that the size or depth of the wound so made was out of proportion to the facilities for drainage, whilst healing was going on, which the urethra alone afforded. In the absence of the latter condition I recognized one reason for the contractile condition of the scar that resulted. In arriving at this conclusion I was much influenced by what I had observed in connection with the treatment of accidental lacerations of the deep urethra by perineal incision and drainage.

It may be generally stated that the worst forms of stricture are those following laceration of the urethra, and considering the circumstances under which such lesions usually heal this is not to be wondered at. Repair goes on slowly under the irritating influence of constant contact with confined urine, and excessive exudate takes place about the seat of the wound. This eventually, in conjunction with the irregularity caused by the wound, forms a stricture of the closest and most contractile character.

On the other hand, in cases where perineal section and drainage were applied, this either did not happen at all, or happened only to a more limited extent. In some instances where this principle was adopted in the case of ruptures of the deep urethra, healing took place just as kindly as it usually does after a median cystotomy, and no stricture followed. This I proved in

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many instances. It seemed reasonable to conclude that the treatment of stricture by section or division of the stricture might be improved by providing better drainage for urine and the discharges from a wound which can only be imperfectly treated antiseptically.

I am not aware that the influence of urine-drainage and irrigation in relation to the healing of wounds of the urethra and the kind of scar-tissue that results has ever been adequately discussed in connection with the operative treatment of urethral stricture.

With the view of meeting what I consider to be causes of failure and recurrence of some operations, I published* a series of cases and observations where I had combined the principles of internal and external urethrotomy in the treatment of certain forms of urethral stricture, which on the whole have afforded good results. I shall best illustrate this practice by a typical case, which was recorded and watched for a considerable number of years:

A man, aged fifty-one years, whom I saw and operated upon in 1890, had been the subject of a stricture with a strong tendency to contract for some years, and had undergone no less than six operations for it, including a divulsion by Holt's method, and five internal urethrotomies at vari-

FIG. 1.

ous intervals and places. For some months before I saw him the stricture had been contracting and closing in spite of the patient's well-directed efforts with suitable bougies to keep it open. Straining to urinate was constant and prevented continuous sleep, and there was some cystitis with probably pyelitis. I performed an internal urethrotomy with Teevan's modification of Maissonneuve's instrument, as I thought that the latter might not stand the strain put upon it by the cartilaginous character of the tissues which had to be divided. This being done, I passed a full-sized grooved staff (No. 12 English) into the bladder. As the latter was evidently gripped in the deep urethra the patient was placed in the lithotomy position, and I divided in the median line from without inwards such contracted tissue as remained. I thus opened the urethra, and found by passing my finger first into the bladder and then hooking it forward along the urethra in the direction of the penile orifice, that the walls of the canal had now been rendered free and unresisting. A full-sized gum-elastic drainage-tube (such as I have elsewhere described and figured†) (Fig. 1) was passed into the bladder through the wound and retained. The parts were washed out with a solution of perchloride of mercury (1 in 6000). The stiff drainage-tube was withdrawn on the sixth day and a soft rubber one (Fig. 2) sub-

* British Medical Journal, July 18th, 1885.
† "Surgical Disorders of the Urinary Organs," fourth edition, and p. 173 (seq.).

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stituted, which was worn for a fortnight longer, and then finally removed, when the wound soon healed. Eight years have now elapsed since this operation was practiced. The patient remains in good health and suffers no further inconvenience from his urinary organs than having occasionally to pass a full-sized bougie for himself.

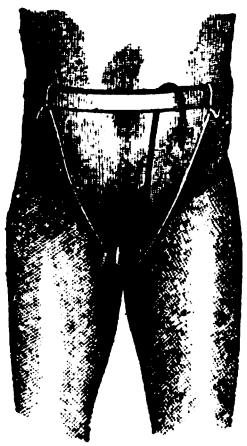

FIG. 2.

It may be thought that the retention of a catheter in the bladder for some time after an internal urethrotomy has been practiced, is to be preferred to an external urethrotomy, and the insertion of a perineal tube for drainage alone. In some instances the former may suffice, but in the majority of cases, where a urethrotomy becomes necessary, it will be found an imperfect substitute. The mechanism for the retention of a catheter along the whole length of the urethra and the irritation it excites, are often obstacles to the successful employment of this expedient.

The conclusions arrived at from the examination of structural lesions used in the treatment of urethral strictures, as detailed in the foregoing remarks, may be summed up as follows:

First. That there is evidence to show that in peri-urethral strictures of the deep urethra the effects of divulsion as practiced in Perréve's and Holt's operations may be limited to rupturing the dense stricture bands in the submucosa of the urethra, whilst the mucous membrane itself escapes any serious injury or laceration, and is rarely restored by stretching to its original dimensions. Here a permanent cure may result.

On the other hand, where the mucous membrane is in itself the seat of stricture and forms part of the latter structurally, it is necessarily torn or lacerated by the process of a sudden divulsion, and the pathological condition consequently becomes assimilated with that of traumatisms of the urethra from external violence accidentally applied, which are followed by strictures of the most contractile and recurrent form.

Second. That there is evidence to indicate that where the entire thickness of a stricture can be included within an incision of moderate dimensions made by an internal urethrotome, the normal calibre of the urethra may be completely and permanently restored. Where this happens, it may be concluded that all the fibres of contraction constituting the stricture were divided at the time of operation. And further, that the converse is equally true. There is also evidence to show that the absence of recurrence, under such circumstances, is not necessarily dependent on the use of a bougie, though the latter is a precautionary measure which should invariably be advised.

Third. That, in the case of multiple strictures, or strictures of the deep urethra of considerable dimensions, either in their length or thickness, treated by an internal incision of corresponding proportions, apart from

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other considerations, the tendency to recontraction and recurrence with an additional amount of cicatricial material, is frequent; the latter being probably due to the circumstances under which healing takes place in wounds of these dimensions so situated.

Fourth. That lesions of the urethra demonstrate in various ways the poisonous effects that unprotected and confined urine is capable of exercising, both on the body generally and on the tissues in contact with it, and that the liability to such effects is greatly diminished where drainage and irrigation render these conditions of the urine unlikely.

Fifth. That in the case of recurring strictures previously treated by incision and in primary strictures of such length or extent as to require an internal section of a corresponding size, or as to which there might be doubt as to whether it would be safely possible so to include them, that for the purposes of the operation and its results such wounds should be made with due regard to other surgical principles, in addition to the one pertaining to the division of the contraction.

Sixth. That there is direct evidence to show that the tendency to recontraction and recurrence of stricture after internal urethrotomy is largely diminished by the concurrent employment of systematic and efficient urine and wound drainage, such as the combination of external urethrotomy, or perineal puncture, affords.

Disinfection of School-rooms and Public Conveyances (Warner, *Col. Med. Jour.*, Feb., 1900).—For disinfection after infectious diseases formaldehyde gas is the most useful agent. To make the gas most efficient it must be generated quickly, and the room be warm and tightly closed to prevent escape.

Antistreptococcus Serum in Measles.—Gillrie (*Canad. Pract. and Rev.*, April, 1900) reports a case of measles in a child of six years treated with this serum. The disease was of a very severe type, pulse 160, temperature 104° F., respiration 55 per minute and the patient delirious. She continued to grow worse, there was a fall in temperature to 100° and great prostration. Fifteen c.c. of the serum were injected in two doses, and almost immediately improvement followed. Other treatment was continued. A rise of temperature of 3° followed the injection. There was no local reaction whatever.

The Demand for a Wider Use of Antitoxin (editorial in *Med. Age*, April 25, 1900).—Although the mortality has been greatly reduced by the use of antitoxin, it is still unnecessarily high. It should be remembered that membranous croup and diphtheria are identical in etiology. The symptoms are unlike those of diphtheria, except for the laryngeal obstruction, and owing to lack of facilities for bacteriological diagnosis the true nature of the trouble is often not recognized. The mortality is very high in these cases, and it would be far better to give antitoxin in all cases of laryngeal obstruction. No harm can result, and many lives may be saved by this practice.

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DISEASES OF THE LUNGS AND PLEURA.*

A Series of Papers written expressly for this magazine, by

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CHAPTER II.—PULMONARY ATELECTASIS.

I HAVE frequently directed attention in the literature to constant areas of diminished lung resonance varying from dullness to flatness as obtained by percussion.† In number and situation, these areas vary, but they admit in the aggregate of definite localization. These areas of dullness or *Atelectasis Zones*, as I have called them, possess one characteristic feature, *they may be dispelled by repeated forced inspirations.* By this simple maneuver, resonance will supplant dullness. The atelectatic zones are dependent on circumscribed pulmonary atelectasis or collapse of limited portions of the lung, and dissociated with any demonstrable lesion. While it is true from the standpoint of the physiologist, that the lungs are in a stretched condition, it is equally true from the position of the clinician that certain portions of the lungs are collapsed and deprived of sufficient air to yield a dullness, and in some instances, a flatness of percussion. The atelectatic zones vary in size from a twenty-five cent piece to a dollar in size, or even more, and are permanently absent when the lungs are emphysematous and temporarily so, after repeated deep inspirations, but they reappear in a few minutes when tranquil breathing is resumed.

In the accompanying illustrations (Fig. 2 and 3), I have projected a composite picture defining the situation of the atelectatic zones based on an examination of over one hundred apparently healthy persons, children as well as adults. On the posterior surface of the chest, the zones are more frequently encountered, and admit of more definite localization than those on the anterior surface of the thoracic wall. Since the advent of the Roentgen rays I have observed the following:

(1) Atelectatic zones throw circumscribed shadows on the fluoroscope, which will vary according to the degree and area of the pulmonary atelectasis. (2) The shadows cast by the atelectatic zones can be made to disappear by continuous forced breathing, and they will reappear after a variable period when quiet breathing is resumed. (3) Before deciding whether the shadow cast on the fluoroscope is really due to pulmonary consolidation, the subject should be instructed to make forced inspiration; if the shadow disappears and is supplanted by a bright reflex, it is due to atelectasis; if the shadow persists, pulmonary consolidation may safely be concluded to exist, excluding, of course, other anatomic conditions that

* The first paper of this series, on "Cough," appeared in our issue of August 25th. The subjects for subsequent papers are as follows: "Pulmonary Anemia," "Pathology of the Blood," "The Heart and Lung Reflexes," "Pulmonary Resonance," "Meteorismus and its Influence on the Thoracic Viscera."

†Abrams: Report of 100 cases treated by the Pneumatic Cabinet, *Pacific Medical Journal*, September, 1891. Pulmonary Atelectasis as a Cause of Anemia, Transactions of the Medical Society of the State of California, April, 1892. Observations on Pulmonary Atelectasis, *ibid.*, session of 1894. *Medicine*, December, 1895. *New York Medical Journal*, June, 13, 1896. *Philadelphia Medical Journal*, November 26, 1898.

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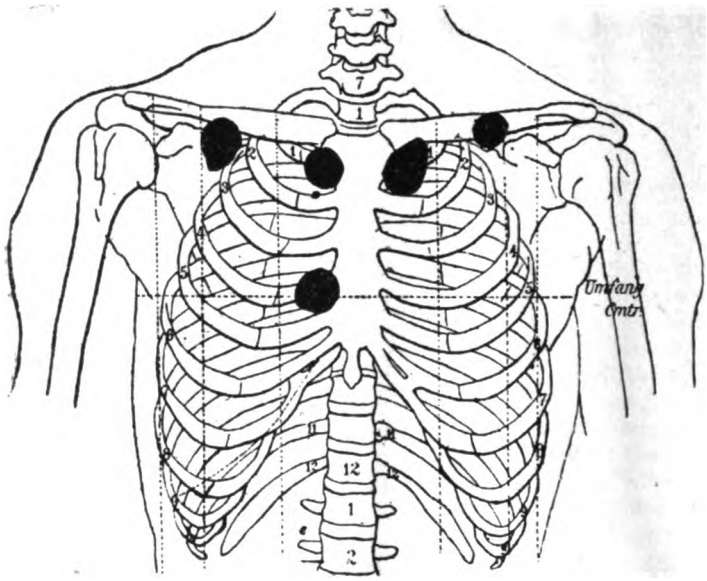

FIG. 2. Patches on the front surface of chest.

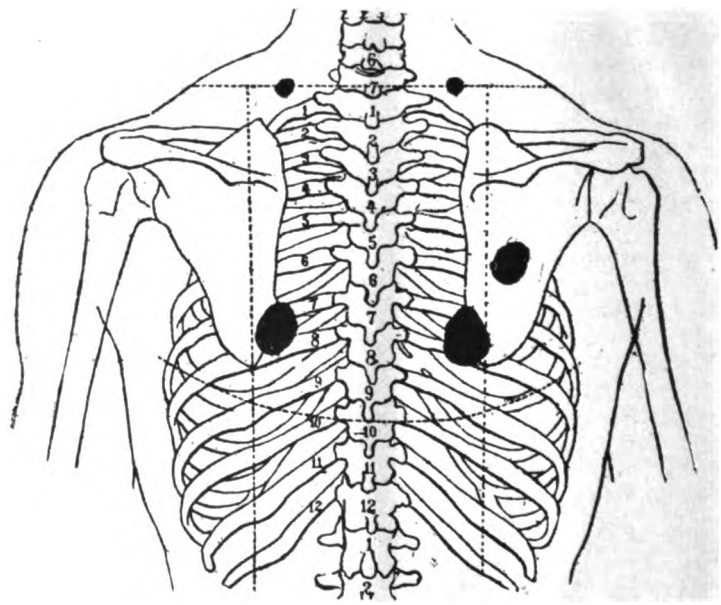

FIG. 3. Patches on the posterior surface of the chest.

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would interfere with the transmission of the Roentgen rays to the fluoroscope. (4) Radioscopy of the lungs demonstrates that the opacities on the fluoroscope, corresponding to the atelectatic zones greatly exceed the percussional areas of the latter, and, furthermore, that in individuals in whom no zones can be demonstrated by percussion, opacities are sometimes present, which disappear after forced inspiration. (5) Before and during a radioscopic examination of the lungs it is always imperative to instruct the patient to practice forced breathing.

What are the practical conclusions that may be formulated as a result of the foregoing observations? 1. Danger may accrue from misinterpreting the physical signs of atelectatic dullness from dullness caused by lung consolidation, an error which can always be avoided, if the patient is directed to practice forced inspirations before percussion of the chest is attempted. Whenever a localized dullness of the lung is detected, it is a wise provision to instruct the patient to take a series of deep breaths, if the dullness disappears, we are dealing with an atelectatic zone, if, however, the dullness persists, we are justified in concluding that there is some lung anomaly. I hold that topographic percussion as obtained ordinarily is of inconstant value. The limitation of organs by percussion, especially the heart, will vary from day to day, and the percussional area of dullness in the same case and at the same time will be variously obtained by different diagnosticians. The borders of the liver, heart and spleen are dependent on the degree of lung inflation, and must vary according to the activity of respiration. Topographic percussion must always be based on the state of pulmonary inflation and the results governed accordingly. The aid afforded auscultation by elimination of atelectasis is obvious. Auscultation of the lungs should be conducted with the patient in different postures, the object being to utilize the actual respiratory capacity of the lungs, thus eliminating the auscultatory phenomena of atelectasis and accentuating abnormal sounds which may be present.

2. Atelectasis bears an important relation to *pulmonary tuberculosis* and *pulmonary anemia*. In the former affection the zones bear an almost definite relation to the points of election and paths of distribution of the lesions in chronic pulmonary tuberculosis.

PULMONARY ANEMIA.

In children, less often in adults, an anemia is often associated with atelectatic zones. This anemia I have designated as pulmonary. Pulmonary anemia attends multiplication or augmentation in area of the zones. The syndrome of anemia disappears by a course of methodic respiratory gymnastics, while its recrudescence is always associated with a reappearance of the atelectatic zones.

Pulmonary anemia is not an invariable concomitant of lung atelectasis, although, as a rule, when anemia of pulmonary origin is present, atelectatic zones may be demonstrated. In association with the anemia, fatigue on exertion, dyspnea, heart palpitation, anomalies of digestion and constipation are usually present. Loss in weight is quite characteristic of pul-

‡ The Medical Standard, January, 1900.

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monary anemia, whereas in the essential anemias the well nourished condition of the patient is manifest.

FERRUGINOUS PREPARATIONS IN PULMONARY ANEMIA.

There is another sign which distinguishes pulmonary from other forms of anemia, the one exception being, perhaps, progressive pernicious anemia, and that is the fact, that while the ferruginous preparations benefit pure anemics, in pulmonary anemia they are practically valueless, at any rate the benefit accruing from their use is evanescent. The real pathognomonic sign of pulmonary anemia is the therapeutic test. Subject such an individual to a single cabinet treatment, employing inhalations of compressed air, and one invariably finds after an examination of the blood an increase in the percentage of hemoglobin if the anemia is of pulmonary origin. The quantity of iron in the blood in pulmonary anemia is probably normal, the element lacking is oxygen; and this view is evidently correct owing to the fact that all my cases of pulmonary anemia were improved by breathing exercises only. One gram of hemoglobin will combine with from 1.6 to 1.8 c.c. of oxygen (measured at 0 degree C. and 76.0 mm. pressure).

NECESSITY OF LUNG DEVELOPMENT.

If pulmonary anemia is dependent on lung atelectasis, as I have attempted to show, the treatment indicated is to secure lung development. All my cases showed immediate and permanent improvement after the inhalation of relatively compressed air by means of the pneumatic cabinet. The color of the patients improved, the oxyhemoglobin and red blood corpuscles increased and the subjective symptoms of anemia disappeared. Whenever the organism is forced to dispose of more oxygen it produces more oxygen carriers. If relapses occurred, which were not frequent, they were attributed in the main to neglect of lung gymnastics and a return to former modes of life. Although I use the pneumatic cabinet for the treatment of pulmonary anemia, and coincidently the atelectasis, I am thoroughly convinced that lung gymnastics alone, although less rapid in its results, will accomplish the same object.

I must protest against the use of prolix methods recommended for lung development. I have already demonstrated the fallaciousness of these methods by means of the Roentgen rays (MEDICAL FORTNIGHTLY, Aug. 5th, 1899). The X-rays may be taken as a trustworthy index in determining the degree of lung expansion. The X-rays shows that there are two methods of securing forcible alveolar lung distention: First by forced voluntary inspirations; and secondly, by cutaneous irritation. Forced voluntary inspiration is abetted by holding the breath after full inspiration is attained, and the longer breathing is suspended after forced inspiration, the more accentuated does the normal brightness of the lungs become when viewed by the aid of the fluoroscope. The second method, by cutaneous irritation (*The Medical News*, Jan. 7, 1899; *The Medical Record*, May 9, 1899,) is based on the fact that the vigorous application of an irritant to the skin (cold water, rubbing with a dry towel) of the thorax,

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will induce an *acute dilatation of the lungs*, a condition I have denominated as the *lung reflex*.

The recognition of pulmonary anemia as one of the earliest trustworthy signs of phthisis is of the greatest importance. I cannot adduce statistics in support of my contention, for that is a difficult matter. When, in the fifteen years of my practice, I encountered an instance of pulmonary anemia, it was treated and not subjected to scientific observation, so it is impossible for me to say how many of my untreated cases of pulmonary anemia would have terminated in bacillary phthisis. There are certain observations in medicine which must necessarily be purely empirical. I will instance a few observations which have some bearing on this subject:

OBSERVATION I—In a phthisical family, of whom three members died of tuberculosis, two daughters came to my office for examination. In one daughter atelectatic zones were variously distributed over the chest. Hemoglobin reduced to 60 per cent. Usual subjective symptoms of anemia. Treatment with the pneumatic cabinet. A period of five years has elapsed and the patient is still healthy. The other daughter also had the subjective symptoms of anemia and the hemoglobin was reduced to 70 per cent. Only one atelectatic zone was present, situated on the anterior surface of the chest close to the manubrium sterni on the left side, and about three inches in circumference. This patient underwent no treatment. Two years later she returned to my office with pronounced pulmonary tuberculosis. Cavitation of the lung corresponding to the atelectatic zone previously mentioned was evident. Six months later the patient died.

OBSERVATION II.—A young man, aged 16. Pronounced evidence of anemia. Atelectatic zones present. Treatment with the pneumatic cabinet of short duration. Three years later the patient died of tuberculosis.

OBSERVATION III.—Girl, aged 14. Hemoglobin reduced to 50 per cent. Red corpuscles reduced to 15 per cent. Atelectatic zones present. No other symptoms. One year later patient presented herself with symptoms of pulmonary tuberculosis. Patient cured.

The foregoing observations have been selected from a small number of analogous cases, and only justify the importance I have attached to pulmonary anemia as an early sign of phthisis.

PATHOLOGY OF THE BLOOD IN DISEASES OF THE LUNGS.

Hematology as a clinical method furnishes undoubted aid in the diagnosis and prognosis of respiratory diseases. At present the results of blood examinations are not pathognomonic, but taken in association with other signs they are invaluable. Here we are concerned chiefly with the kinds and number of *leucocytes* found in the blood. To differentiate the varieties of leucocytes, we must first stain our blood films, and the following simple and expeditious method is applicable for the busy physician. After preparing the blood films in the usual way, they are placed in the following mixture:

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Saturated solution of eosin in absolute alcohol..... 25 c.c.
Pure ether..... 25 c.c.
Solution of corrosive sublimate in absolute alcohol.....
.....(2 grms in 10 c.c.) 5 drops

In this mixture, fixation will be complete in three minutes, but it is better to leave the films in the solution for several hours. After fixing and staining wash in water and stain for one or more minutes in a saturated watery solution of methylen blue. Wash again, dehydrate in absolute alcohol, clear and mount in xylol balsam. By this method red corpuscles are stained pink, all nuclei, deep blue, the blood plates a fainter blue. The bodies of the leucocytes are in various shades of pink, the eosinophile and basophile granules are well brought out. Leucocytes are classified according to the staining of the nucleus and cell body. The following are the varieties of leucocytes in normal blood with their relative proportions:

1. *Small lymphocytes*, also called basophile cells, because the bodies are stained blue by a basic dye like methylen blue—20-30 per cent. They are composed almost wholly of the nucleus surrounded by a little protoplasm, in which fine basophile granules may be detected.

2. *Large lymphocytes* have plenty of protoplasm in which no granules are usually seen. The nucleus is usually spherical, but may be horseshoe shaped, in which instance *transitional leucocyte* was at one time applied to this cell—4-8 per cent.

3. *Polynuclear neutrophile leucocytes* contain two or more nuclei more or less subdivided. They contain much protoplasm thickly studded with fine red granules, and for this reason have received the name *neutrophile leucocytes*, neutrophile signifying that acid stains, like eosin and basic stains, like methylen blue, do not bring out the granules clearly—62-70 per cent.

4. *Eosinophile leucocytes* contain a single or bi-lobed nucleus surrounded by protoplasm containing large granules stained bright red with the eosin and, owing to the affinity of the granules for the stain, they have been called eosinophile leucocytes. The eosinophile are distinguished from the neutrophile by the greater size of their granules—1-4 per cent.

Number.—The relative number of leucocytes as compared with the red corpuscles, is 1 of the former to 600 or 1000 of the latter. The number of leucocytes in normal blood is about 7000 per cmm. Not more than five leucocytes normally appear in the field of vision when high objectives are employed. When more than ten are seen, the leucocytes are increased in number. The normal proportion of leucocytes with divided nuclei to those with rounded nuclei is about 2 to 1.

A moderate increase in the number of leucocytes is called *leucocytosis*. When the number is diminished, we speak of *leucopenia*. We speak furthermore of *physiologic* and *pathologic leucocytosis*. The former variety occurs in infancy, during pregnancy and after meals. It is the pathologic variety which interests us at this moment which, accompanying many infections, is spoken of as *inflammatory leucocytosis*.

In inflammatory leucocytosis, the *polynuclear variety* is increased in number, and there is little doubt that leucocytosis bears some relation to

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the infections. The prevailing *phagocytic theory* accounts for this excessive production of leucocytes by supposing a conflict to exist between the weapons of nature, the leucocytes, and the infectious agents. A feeble or susceptible organism cannot cope with the invading army of bacteria, owing either to diminished production or diminished power of the leucocytes. For purposes of diagnosis it is well to remember that there is an *absence of leucocytes* in the following diseases: Typhoid fever, malaria, grippe, measles and tuberculosis.

Croupous Pneumonia.—The leucocytes are always increased, and continue so throughout the febrile period. In a pseudo-crisis, the leucocyte remains high, but in a true crisis, the count falls appreciably. Leucocytosis continues in delayed resolution, and becomes reduced to normal when resolution eventually occurs without complications. When abscess, empyema or gangrene supervene, the leucocyte count remains high. The degree of leucocytosis is not commensurate with the amount of lung implicated, nor with the height of the fever. Cabot divides the pneumonia cases into the following groups as regards the degree of leucocytosis present:

1. *Mild infection*, vigorous reaction, slight leucocytosis.
2. *Severe* or *moderate infection*, vigorous reaction, marked leucocytosis.
3. *Severe infection*, feeble reaction, no leucocytosis.

The cases in class 1 all recover; in class 2, which includes nine-tenths of all cases, patients may or may not recover, whereas, in the third class, patients almost invariably die owing to the inability of the organism to raise the leucocyte count. Speaking generally, the *absence of leucocytosis is a bad sign*, while its presence is neither good nor bad (Cabot). Von Jaksch observing the fatality of cases without leucocytosis advised producing leucocytosis by the injection of irritants like turpentine, with the object of creating an abscess. Pilocarpin and nuclein have likewise been employed for this purpose, but with no obvious benefit to the patients. Hare has made the pertinent suggestion of using cold baths in preference to antipyretics for temperature reduction insomuch as the latter check leucocytosis. The average number of leucocytes in pneumonia is about 25,000. The leucocytosis in pneumonia, as in other pyrexias, is to be regarded as a defensive process of the organism against the virus of the disease. In differential diagnosis, the leucocyte count is of some moment. Take *central pneumonia* as an instance where there are no physical signs. If the leucocytes are increased in number, we may exclude typhoid fever, malaria and grippe, and make the diagnosis of pneumonia when the symptoms, but not the physical signs are suggestive of the disease.

Phthisis.—Here again we are constrained to quote Cabot, the apostle of hematology. His conclusions are practically as follows:

1. In *incipient phthisis* the leucocytes are normal except after hemoptysis. 2. There is usually leucocytosis after an attack of hemoptysis in deference to the law of ordinary post-hemorrhagic leucocytosis and disappears quickly when the hemorrhage subsides. 3. *Cavities* are very constantly accompanied by leucocytosis and the absence of leucocytosis negatives cavitation of any great extent. 4. *Tubercular pneumonia* may cause an increase of white cells, sometimes as great in croupous pneumonia, but this is not

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invariable. 5. *Fibroid phthisis* without cavity formation shows no increase of leucocytes. If there is a *normal temperature* the leucocyte count is normal, but a febrile state may or may not be attended by leucocytosis (according, presumably, as the fever is or is not due to pyogenic organisms). In a general way, the worse the case, the higher the leucocyte count, yet the signs may be advanced without causing any leucocytosis if cavities are absent. As a rule, we find no qualitative changes in the leucocytes. Neusser advocates the theory that *perinuclear basophilia* during tuberculosis is a favorable sign, and shows an organism capable of resisting tubercular infection. Basophilia, he contends, is an evidence of the uric acid diathesis, and in individuals with gout, leukemia and bronchial asthma who show this condition, tuberculosis rarely occurs. The evidence of perinuclear basophilia when tuberculosis does coexist with the uric acid diathesis shows that the tubercular process has a tendency to heal. If the theory of so competent an authority is correct, we have at our command a valuable sign in prognosis. Neusser employs the following stain for the perinuclear basophilic granules:

Saturated aqueous solution	acid fuchsin	50 c.c.
	orange G	70 "
	methyl green	80 "
Distilled water		150 "
Absolute alcohol		80 "
Glycerin		20 "

This stain brings out a grouping of dark blue-stained granules around the nuclei of the mononuclear leucocytes, and over and around the nuclei of polynuclear leucocytes.

Abscess of Lung.—Here, as in other pus collections, the leucocyte count is raised. The average count in three cases of lung abscess following pneumonia was, according to Cabot, about 16,300. In *empyema* the leucocyte count is increased. In differential diagnosis this fact may be of importance in adults. The average leucocyte count in *serous pleurisy* is 8,820; in pneumonia, 24,000; in empyema, 18,300. In children a simple serous pleurisy causes such a rapid rise in the leucocyte count, that the latter is not of much value in distinguishing a serous pleuritis from an empyema.

Asthma.—This affection causes an increase in the *eosinophile leucocytes* in the sputum (65 per cent of all leucocytes) and in the blood. In the latter fluid they average normally about ¼ per cent, but in asthma they run as high as 14 per cent. This increase is only present at the time of the paroxysm, and for a short time before and after it. A paroxysm may be predicted by demonstrating their increased percentage. The increase of eosinophile cells occurs only in bronchial and not in asthma complicating cardiac or renal disease, a fact of much importance in diagnosis. While the eosinophiles are usually absent after an asthmatic paroxysm, Gobuloff* demonstrated 17 per cent of them in one case one month after an attack.

In *chronic bronchitis* leucocytosis is uncommon, although in the acute variety, the leucocytes are increased in number.

* Sammumlungen Klin. Vortlage, Nos. 256 and 257, 1899.

(TO BE CONTINUED.)

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MEDICINE.

BY FRANK PARSONS NORBURY, M. D.

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AND EGBERT W. FELL, B. S..

JACKSONVILLE, ILL.

The Treatment of Whooping Cough.— Coggeshall (*Med. News*, March 31, 1900) advises the following treatment: First spray the nasal mucus membrane with a cocaine solution, then apply a two or four per cent solution of silver nitrate, followed by a spray or post-nasal alkaline antiseptic wash. The application of suprarenal extract may be tried.

Contagion in Leprosy as Observed in San Francisco.—Montgomery says (*Jour. A. M. A.*): "The region west of the Rocky Mountains seems not only to be the recipient of a large number of lepers from outlying leper countries, but the disease appears to be capable of propagating itself in this country. The number of incoming lepers to the Pacific coast from foreign countries must necessarily grow larger with our increasing trade," but as annexation and trade cannot be stopped on account of so mildly contagious a disease, the remedy must be segregation of the lepers already here, and more stringent examination of immigrants from leper countries.

The Bubonic Plague (Klebs, *Med. News*, February 17, 1900).—The specific cause of plague is a short, rod-shaped bacillus growing best on normal agar or gelatin agar, in transparent colonies, becoming white, then yellow and granular. Optimum temperature below 36° C. It stains slightly in alkaline analine dyes and is decolorized by Gram's method. Opinion differs as to spore formation. Characteristic involution forms develop on salt agar. It will live in water, milk or urine many days; resists drying for some time; is destroyed by heating to 69° C., and resists freezing. Disinfection is best accomplished by acid solutions; carbolic acid 2 per cent, mercuric chloride .2 per cent, or copper sulphate, or potassium permanganate in .1 per cent solutions are effective. Infection may occur from contagion, from rats or insects, or from water or food. Encouraging results have been obtained from vaccination by Haffkine and from anti-plague serum by Yersin. The spread of the plague should be combated by general hygienic measures. Transportation of persons and merchandise should be controlled by especially educated sanitary officers. On the appearance of plague suspected persons, and all cases of pneumonia should be reported; portable laboratories established for rapid diagnosis; the house disinfected with formalin-steam, and the well members of the family carefully watched. Rats may be poisoned with strychninized-wheat. Special institutions should be erected by the government for experimentation, with a view of obtaining a protective or curing vaccine or serum. The danger of an epidemic in the United States is slight.

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Society Proceedings.

THIRTEENTH INTERNATIONAL MEDICAL CONGRESS.

The sessions of this Congress, composed of some thirty or more sections, were held in Paris, August 2 to 9, inclusive. Representatives of thirty-four countries were present to the number of about 6,500; 420 of these were registered from the United States and 226 from Great Britain; Germany sent 572 delegates; Russia, 805; Italy, 324; Spain, 219. The French language was distinctly the official one of the congress, all programs, announcements and reports being printed in French exclusively. This rule was a great disappointment to the delegates who were not familiar with the native tongue. Prior to the formal opening of the congress reunions of the delegates from the various countries represented at the congress were held in the basement of the buildings of the Paris Faculty of Medicine, a separate room being assigned as headquarters for the representatives of each country.

The first general session of the congress was held in the great fete hall of the exposition, and the second and third general sessions were held in the large amphitheater of the Sorbonne. The meeting places for the several sections were selected from among the lecture halls of the various institutions of learning in Paris.

A list of the papers read would fill several pages, while among the authors represented were many of the leading authorities of the medical world. Below is given the titles of a few of the papers presented by authors known in the United States: "The Soldier's Ration, its Use and Abuse in the Tropics," by Major Louis L. Seaman, U. S. A.; "Action of Digitalis and its Active Principles," by Dr. Lander Brunton, London; "The Cure of Consumption," by Dr. Helen Densmore, New York: "The Modern Treatment of Yellow Fever," by Dr. Fernandez de Ibarra, New York; "The Virile or Bulbo-cavernous Reflex Diagnostically and Medico-legally Considered, with a new Method of Eliciting the same and new Suggestions in Practice in Connection Therewith," by Dr. C. H. Hughes, St. Louis; "The Technique in the Interscapulo-thoracic Amputation," by Dr. Robert G. Le Comte, Philadelphia; "Report of a Case of Ligation of the Abdominal Aorta in which the Patient Lived for Forty-eight Days," by Dr. Keen, Philadelphia; "Therapeutic Indications in Appendicitis" (report), by Dr. F. Treves, F. R. C. S., London; "Circumdental Diseases, with Special Mention of Erythrosis of the Gums, its Causes, Different Aspects and Therapeutics," by Dr. Nash, New York; "Remarks on Benign Tumors," by Dr. Knight, Cincinnati; "The Pathology and Treatment of Tuberculosis of the Cervix Uteri," by Dr. H. D. Beyea, Philadelphia. In the Genito-urinary section interesting papers were read by Mr. Reginald Harrison, of London, Dr. Ramon

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Guiteras, New York City, and Dr. Hugh Young, of Johns Hopkins, Baltimore.

Owing to the assassination of the King of Italy, the social features of the congress were much abridged. The president of the congress, M. Lannelongue, received the delegates and the presidents of the several sections on Friday evening, August 3d. A soiree was given to the members and delegates in the palace of the Senate and in the Luxembourg Gardens on Monday, August 6th, at which Mounet Sully, of the Comedie Francaise, and Madame Sarah Bernhardt recited poems and M. Renaud and Madame Litvinne, of the Opera, and M. Fugere, of the Opera Comique, sang. The presidents of the several sections all gave either dinners or receptions or both and numerous excursions were arranged for the entertainment of the members.

The most interesting social feature of the meeting was the dinner given to Lord Lister on August 1st by "Scientia," a scientific society of Paris. The dinner was given in the exposition grounds, about fifty guests being present.

INTERNATIONAL CONGRESS OF THE MEDICAL PRESS.

On July 26th this congress was organized in Paris, under the auspices of the French Medical Press Association.

Some three hundred persons, including many ladies, were in attendance at the first session, which was formally opened by the Minister of Commerce in the Press Pavillion of the Exposition. Professor Virchow of Berlin was present, and was the lion of the occasion, being the recipient of many honors as the doyen of the medical press. The proceedings opened with an address by Professor Cornil, who paid a glowing tribute to Virchow's Archives and to the work of its founder in medical journalism. In response Professor Virchow made a brief address, which was received with great enthusiasm.

At the conclusion of the preliminary addresses the following officers were elected: President, Professor Cornil; vice presidents, M. Richet and M. Lucas-Championiere; secretary-general, Dr. Blondel, and treasurer, Dr. Cezilly. The following honorary officers were also elected: Honorary presidents, Drs. Virchow, of Berlin; Posner, of Berlin; Fraenkel, of Vienna; Spatz, of Munich; Love, of St. Louis; Matthews, of Louisville; Jonnesco, of Bucharest; Julin, of Stockholm; Hansson, of Christiania; Valledor, of Madrid; Bacelli, of Rome; Bossi, of Genoa; Ceccherelli, of Parma; Gallet, of Brussels; Podwyssowtski, of Kiev; Ehlers, of Copenhagen; Tigerstedt, of Stockholm, and Sprigg, of London. Honorary vice presidents: Drs. Landouzy, Bourneville and De Maurans, of Paris. The following secretaries were also elected: English, Dr. Chas. Wood Fassett; Italian, Drs.

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Andre Ceccherelli and Laudi; French, Drs. Romme and Regnier; German, Drs. Pick and Shober.

The first session on the second day was opened by a series of addresses from the official delegates from foreign countries, after which the reading of papers was begun. During the second and third days papers on the following subjects were presented and the majority of them discussed at some length: Modern Technique of Indexing in Medical and Scientific Reviews, by Marcel Baudouin; Laudatory Notes in Medical Journalism (La Publicite dans les Journeaux medicaux), by M. Archambaud, Paris; Free Medical Journals, by M. Chervin, Paris; Uniformity of Terminology in Scientific Classification, by M. de Maurans, Paris; Photography and Cinematography in the Medical Press, by M. Doyen and M. Periodical Press, by G. Richet, Paris; Relations Between the Medical and the Political Press, by Prof. Bossi, Genoa; The French Law Relating to Literary and Artistic Property, by M. Pouillet and M. G. Rochet, attorneys, and M. de Maurans, editor of la Semaine medicale, Paris; The Ownership of Ideas and of Forms of Ideas in Scientific Journalism, by M. Budouin, Paris; The Right of Reproduction of Engravings, by M. F. Alcan, Paris; The Right of Reply in the Scientific Press, by M. Jayle and M. Pistre; Professional Solidarity in the Medical Press, by J. P. Noir; The Abuse of the Title Doctor, by G. Levy.

Sketches of the medical press in their respective countries were presented as follows: Greece, by Dr. Foustanos; Cuba, by Dr. Fernandez; Belgium, by Dr. Gilson; America, by Dr. Fassett; London, by Dr. Sprigg, and Germany, by Dr. Spatz.

The members and delegates were the recipients of many courtesies at the hands of the Parisians, the most notable entertainments being a reception by the President of the Congress, Dr. Cornil, and a dinner by the secretary, Dr. Blondel. The congress will hold its next meeting in Brussels, in 1901.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

The annual meeting of this Society will be held under the presidency of Dr. Harold Moyer, at Asheville, N. C., October 9, 10 and 11, 1900. Following is the preliminary program:

I. N. Love.....St. Louis, Mo.
Address in Medicine.

C. A. Wheaton.....St. Paul, Mo.
Address in Surgery.

L. W. Beardsley.....St. Louis, Mo.
Canthoplasty in Ophthalmic Practice.

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Andrew Timberman.....Columbus, O.
The Etiologic Relation of Eye-Strain to Epilepsy.

Otto J. Stein.....Chicago, Ill.
Middle Ear Disease in its Relationship to the Cranial Cavity.

Geo. F. Keiper.....LaFayette, Ind.
Some Observations Gleaned from Some Recent Cases of Mastoiditis.

Alex C. Wiener.....Chicago, Ill.
Treatment of Tuberculosis of the Spine.

A. J. Ochsner.....Chicago, Ill.
Relation of Appendicitis to Gall-Stones.

B. Brindley Eads.....Chicago, Ill.
Ventral Hernia Following Laparotomy.

Geo. W. Crile.....Cleveland, O.
Technique for Removal of Tumors of the Neck.

Geo. W. Cale, Jr.....Springfield, Mo.
A Case of Intermittent Hydrops of the Knee.

Jas. B. Bullitt.....Louisville, Ky.
Hernia in Man and Animals.

Thomas H. Manley.....New York City.
Notes on Fractures Contiguous with or Involving the Articulations of the Larger Bone Shafts.

John L. Jelks.....Memphis, Tenn.
The Treatment of Peri-Rectal Abscesses.

Sterling B. Taylor.....Columbus, O.
Obstipation.

J. Rawson Pennington.....Chicago, Ill.
Simple Operation for Hemorrhoids; Enucleation.

A. B. Cooke.....Nashville, Tenn.
Revelations of the Proctoscope in Health and Disease.

H. O. Walker.....Detroit, Mich.
Vaginal versus Abdominal Hysterectomy.

R. S. Sutton.....Pittsburg, Pa.
Cancer of the Uterus and its Treatment.

C. S. Bacon.....Chicago, Ill.
The Prevention and Management of Infection of the Breast During Lactation.

J. H. Taylor.....Indianapolis, Ind.
The Girl at Twelve.

Yeatman Wardlow.....Columbus, O.
Ectopic Gestation.

Emil Ries.....Chicago, Ill.
Pathology of Chronic Gonorrhea of the Male Sexual Organs.

A. Ravogli.....Cincinnati, O.
The Gonococci in the Gonorrheal Secretions.

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R. A. Bate ..... Louisville, Ky.
Asthma.

T. D. Crothers ..... Hartford, Conn.
The Curability of Inebriety by Medical Treatment.

Wm. O'Neal Mendenhall ..... Richmond, Ind.
The Determination of Sex.

Frank P. Norbury ..... Jacksonville, Ill.
Pulmonary Tuberculosis in Infancy and Childhood.

W. H. Bates ..... New York, N. Y.
Further Observations on the Clinical Application of the Suprarenal Capsule.

Albert E. Sterne ..... Indianapolis, Ind.
The Association of Diseases.

Wm. Porter ..... St. Louis, Mo.
The Growing Necessity for Sanatoria for the Tubercular.

I. H. Goss ..... Athens, Ga.
Erichsen's Disease: Does it Exist? Various Injuries Due to Accident.

Wm. F. Barclay ..... Pittsburgh, Pa.
The Philosophy of the Science and Art of Medicine.

J. E. Allaben ..... Rockford, Ill.
Treatment of Adherent Cysts of the Ovary and Broad Ligament by Incision and Drainage.

L. H. Warner ..... Brooklyn, N. Y.
Differential Leucocytosis.

J. G. Carpenter ..... Stanford, Ky.
Suprapubic Cystotomy for Traumatism, with Median Perineal Drainage.

THE MEDICAL SOCIETY OF THE MISSOURI VALLEY

Held its annual meeting at Council Bluffs, September 20th. Three sessions were required to complete a most interesting program, and later, at the Grand Hotel, the members gathered around the festal board, where they recuperated from the labors of the day.

The society voted to contribute $25 to the Rush Monument Fund, and a resolution was adopted providing for a banquet after each meeting.

Following officers were elected: President, Dr. V. L. Treynor, Council Bluffs; First Vice-President, Dr. B. B. Davis, Omaha; Second Vice-President, Dr. T. E. Sampson, Creston; Treasurer, Dr. T. B. Lacey, Council Bluffs; Secretary, Dr. Chas. Wood Fassett, St. Joseph. Next meeting in March, 1901, at Omaha.

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PRACTICAL THERAPEUTICS.

PROSTATITIS.—Prostatitis originated from gonorrhoeal infection, yields to the use of cystogen. It is best given in five grain tablets four times a day.

AN ADDITIONAL HONOR.—We have just been advised of the award by the Judges of the Paris Exposition, to Messrs. William R. Warner & Company, of Philadelphia, New York and Chicago, of the highest medal prize, for their justly celebrated pharmaceutical products. This makes the 17th World's Fair highest prize, which has been awarded this well known and justly celebrated firm, and we join in congratulations to Messrs. Wm. R. Warner & Co., over their well merited and unbroken line of victories in competition with the World's manufacturers.

TREATMENT OF HAY FEVER—In a highly interesting article on this subject Dr. A. E. Abrams of Hartford, Conn., (Annals of Otology, Rhinology, and Laryngology, May, 1900) states that hay fever occurs exclusively in individuals of acquired or inherited neurotic temperament, and for this reason the disorders cannot always be cured by the same remedy, or line of treatment, any more than a prescribed course of diet and remedies would be applicable to all cases of neurasthenia. In the treatment he lays much stress upon obtaining the co-operation of the patient for a period of time which in many cases must be extended over years rather than weeks or months. As the time for the anticipated attacks approach the patients must be warned against all over-excitement or depressing influence. As a tonic the author has found nux vomica or strychnia more useful than any other medicine Opium he regards as dangerous, while the bromides have a limited range of usefulness. In especially nervous cases the common pill of camphor, hyoscyamus and valerian proved quite useful. In his opinion, heroin promises to be an important addition to our means of allaying the accompanying cough or asthma, and is an excellent aid in the treatment of gastro-intestinal irritation that some of these cases suffer from. The initial dose should be small, not over one-thirtieth of a grain, every two to four hours at first. While it should not be used unguardedly, it is much less likely to produce habituation than opium or morphine. The extract of suprarenal gland is highly recommended for the temporary relief of the nasal obstruction. All necessary operative work on the nose should be done before or after the hay fever season. In connection with Dr. Abrams' paper it is of interest to note that Dr. Wetherby has also employed heroin with excellent results in the treatment of hay fever, producing both prompt and permanent relief of the distressing irritation of the air passages. In cases of hay fever attended with gastric disturbance it is advisable, on the ground of recent observations, to employ the soluble heroin hydrochloride, owing to the fact that heroin acts best in an acid medium, and for the same reason the drug should be administered in these cases after the ingestion of food.

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Asst. Gen. Pass. Agt.
Louisville, Ky.

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The Medical Fortnightly.

Issued Tenth and Twenty-fifth of Every Month by the Fortnightly Press Co.

UNDER THE EDITORIAL DIRECTION OF

FRANK PARSONS NORBURY, M. D. AND THOS. A. HOPKINS, M. D.

Secretary: CHARLES WOOD FASSETT, M. D.

A COSMOPOLITAN BIWEEKLY FOR THE GENERAL PRACTITIONER

Editorial Offices in St. Louis, Chicago, Cincinnati, Jacksonville, St. Joseph, Kansas City, and Pueblo, where specimen copies may be obtained and subscriptions will be taken.

Address all business communications to the Fortnightly Press Company.

Address all contributions and books for review to the Editors, Suite 312, Century Building, Saint Louis.

Paris: U. S. Press Building, Espanade des Invalides, Paris Exposition.

Volume XVIII OCTOBER TENTH Number 7

Editorial Department.

Nihilism in Therapeutics.

IN THIS day of systems of mental therapy, when theoretical and gross empirical methods prevail; when christian science, magnetic healing, dowism, osteopathy and other psycho-therapeutic practices prevail over more rational means and methods, we are apt to feel that, perhaps, there is something wrong in rational therapy, when such systems can secure such a following.

We, doubtless, ask ourselves what is wrong, and why this seeming nihilism in the present-day therapy? Let us not be hasty in our conclusions that Nihilism exists. Let calm, dispassionate inquiry be made into the practice of today, and we will find cause for congratulation over the real practice of modern therapy and its prospects in the future.

Barker, now of Chicago, in an address before the Ontario Medical Association, in June, "On the Present Status of Therapy and Its Future," reviewed briefly the progressive steps made in the practice of therapy, and showed that "real progress in therapy dates from the time when natural sciences became an exact study. Rigidly accurate observation followed by mature reflection has led to experimentation. Medicine of this kind is only a century old."

The rapid changes incidental to the reliable scientific advances made in pathology, when Virchow's cellular pathology, laid the foundation for our modern and elaborate study of disease processes; in histology and physiology, when by perfection of the microscope and microscopic technique the study of the normal mysteries of life, opened the way for the modern field of physiological inquiry; the elaborate and patient bacteriological investigations leading into the very stronghold of disease and permitting inquiry into their growth and development, and the perfected means and methods of diagnosis, all have contributed toward making modern medicine one of the most wonderful intellectual advances of the century.

Today we view disease from the standpoint of rational investigation, and as we trace its processes, as Barker says, farther and farther back to the earliest stages, when function begins its deviation from the normal, and

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the causes underlying those deviations gradually become recognizable, the means of prevention and the indications for treatment become obvious.

We believe that therapy of today is more rational than ever before, and in internal medicine we are seeking the cause and are concentrating our methods towards its removal. It is not by drug treatment alone that we are seeking to relieve disease; on the contrary, the field of medicine has become widened, and we seek all and every means that will let us compass disease.

It is toward the relief of the patient that our therapeutic efforts are directed; we study the natural history of disease, therefore, that we can better design the practice to control the disease.

Our therapy is not nihilistic; no, it is rational, and distinctly so, and the future gives hope for even greater advances in the treatment of disease.

F. P. N.

The New Animal Therapy.

WE have before us a batch of literature, journals, bulletins, etc., concerning the New Animal Therapy, born in Missouri (the happy land of fake medical practice), but reared in Chicago, where the unsalted sea air has allowed it to blossom like the rose. From the voluminous literature sent out by the Literary Press Bureau of this organization, we take it that it is out for business, and is landing the usual gullible medical men always open for gold-brick schemes. The plan of business organization of this concern is on a plan destined to attract attention, secure victims and work the same old game as followed by Keeley, Still, Weltmer and others of their kind. This plan is to publish a journal, which circulates like the coal-dust of Chicago in every household, creeping in somewhere and bound to stay if it can. This journal, semi-professional in its make-up, of course attracts the credulous, whether he be a shallow-minded medical man or an unsophisticated layman, he reads, he becomes interested he falls in line and soon is holding a banner in this procession of the great unwashed.

If a medical man, perhaps, he knows the scheme and wants himself to be a steerer for the game, so he buys for $100 a privilege, pays $30 for chips, and goes into the game, making his victim pay $10 for every dollar's worth of the "queer" he "shoots" under his skin. So goes the game along, and merrily the crowds join in the procession, thinking in their own way, that it is "just the stuff." But poor fools, if they only knew, that ever since Ptolemy I. played horse with the alligators in the River Nile, some new scheme has been born every year. Now comes Joseph on the banks of the Chicago River, contrary to Joseph of old, and sells a mess of goat juice for the benefit of his brothers in bondage. Joseph does not ride on a camel, but speeds along the lake shore drawn in his automobile, while the guys pay the freight. Joseph has a "good thing," and judging from his following he intends to shove it along.

We intend to say more anon about Joseph and his tribe and his billy-goats.

F. P. N.

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THE National Wholesale Druggists' Association in convention assembled in Chicago recently, discussed the adulteration of drugs, and advocated measures to insure pure drugs.

Pure Drugs Demanded.

It seems that there are manufacturing chemists and jobbers, to say nothing of the retailers, who being men of easy consciences, are disposed to commit fraud upon the consumer by substitution of inferior compounds for the best, or the mingling of foreign material with the genuine article.

We all know the giant evil "substitution," but it is incomparable to the fraud of adulteration, this practice nullifies the efforts of the physician and jeopardizes the life of the patient.

It is timely that concerted effort be made by the conscientious and reliable dispensers of drugs, to enact legislation that can be enforced regulating this pernicious practice of substitution and adulteration.

The great trouble with the pure food law of Illinois, one of the measures designed to suppress adulteration, is, that it fails to punish the dispenser, when he pleads ignorance of substitution. This is a loop-hole which should be covered, and in the adulteration or substitution of drugs "the punishment should fit the crime." That is a punishment proportionate to the damage done by adulteration or substitution.

We earnestly hope that the commendable efforts of the wholesale druggists may be successful. F. P. N.

OUR readers will notice that the present issue marks the beginning of a new period in the FORTNIGHTLY'S progress; we take genuine pleasure in the fact that from this time on we will devote *40 pages to text in each issue.* This change we have for some time contemplated, we have appreciated the popularity of our journal, and have felt that we owed our patrons an evidence of our appreciation, but hitherto the time has not seemed ripe for the change. We find ourselves at present with a number of scientifically valuable serial articles, the publication of which would encroach on shorter, though equally valuable matter did we reject the idea of expansion. But we do believe in growth, and when we find that the *80 pages per month,* which we will hereafter give our readers, is too little and necessitates cramping some department, we will increase our size again; in the meantime we will dedicate our present enlargement to those who have made it possible—our readers.

Our Expansion.

RUSH E. BLACKMAN, representing Shieffelin & Co., spent the greater part of September renewing his acquaintance with the St. Louis profession. We are glad to learn that we may hereafter expect visits from him at frequent intervals.

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DR. PRESTON B. SCOTT, President of the Association of Physicians and Surgeons of the Confederate Army and Navy, died at Louisville, on September 24th.

DR. WM. RADER, of Silverton, Colo., made the FORTNIGHTLY office a brief visit recently. The doctor is returning to Virginia, his native State, with a view of locating there.

DR. HEINRICH SCHENER, of Munich, who is making a tour of American hospitals, spent a few days in St. Louis recently. The doctor speaks enthusiastically of the institutions and cities he has visited.

THE marriage of Dr. Jno. A. James James, of this city, to Miss Nelle Blanche Robeson, of Rochester, N. Y., is announced. Dr. and Mrs. James will be at home at 4216 Westmister Place after November 1st.

DR. F. L. HENDERSON now occupies a handsome office suite next door to our sanctum. Dr. Fayette C. Ewing has also joined the Century medical colony. The Century Building is by all odds the medical building of the city.

DR. S. A. KNOPF, of New York City, was awarded at Berlin, July 31, the prize of 4,000 marks ($1,000) offered by the Tuberculosis Congress for the best essay on the subject, "How to Fight Tuberculosis as a Disease of the Masses."

MANY of the characters in the Chinese language are very suggestive of the relationship between husband and wife, and leave no doubt as to the subordinate position which the woman occupies in Chinese domestic life. The part which the Chinaman plays in securing his bride is vigorously illustrated in the word to seize, the character for woman crouching under the Chinese symbol for claws, while the character for wife, indicated by a woman placed beside a broom, is evidence of the Chinaman's opinion with regard to the proper position of his helpmate in his household.–October Ladies' Home Journal

NEW HOME FOR J. B. LIPPINCOTT COMPANY.—An important transaction has just been concluded by which a number of old-fashioned dwelling houses on East Washington Square, Philadelphia, have passed from the ownership of the heirs of famous lawyer, Horace Binney, and will soon be torn down to make way for a fine building to be occupied by J. B. Lippincott Co., whose old home on Filbert St., above Seventh, was burned down some months ago, possession is to be given by September 14, and it is expect that the demolition of the old structures will begin soon after. The site is considered a very eligible one for the Lippincott Company, as it has light on three sides, is very central, and they will be enabled to promptly issue and increase their excellent line of medical publications by standard authorities. By the way, their new catalogue, just issued, is handsomely illustrated with excellent portraits of many of America's leading medical writers. Many historic recollections cluster about the properties just sold. They stand on the ground once occupied by the old Walnut Street Prison, built before the Revolution, and in which during the struggle the English confined American prisoners, during the former's occupation of Philadelphia.

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The Reviewer's Table.

Books, Reprints, and Instruments for this department, should be sent to the Editors, St. Louis

THIS well-known Annual is now in its eighteenth year of publication. This volume is of the usual high order of review of the literature of the year. The corps of contributors being well-known English and American medical authors of established reputation. The book is essentially English in its make-up, and consequently it lacks the American feature of illustration, excepting the colored plates which are good. The text, however, is carefully compiled, and represent the progress in the whole range of medicine and surgery for the year. The original contributions are comprehensive and thorough, and gives value to the book as a quick reference work on the literature of most any subject in medicine and surgery.

THE MEDICAL ANNUAL AND PRACTITIONERS' INDEX. A Work of Reference for Medical Practitioners. New York and Chicago: E. B. TREAT & COMPANY. 1900.

F. P. N.

HISTOLOGICAL study has been greatly advanced during the past year, especially in improved technique; emphasizing the growing necessity of perfected knowledge is this department as one of the essential foundation stones to medical education. Dunham has formulated the evolutionary steps of study of all life in a way that gives zest and interest to the student as he advances in his work. This book is one that is uniquely thorough, because its author as a teacher knows the needs of the student. It is appropriately illustrated in clear, beautiful prints, and the text is well printed. Responding to the request of the large proportion of teachers whose curricula make normal and pathological histology separate courses, Professor Dunham has separated his well known work into two volumes. In that on Normal Histology which is fresh from the press, he has added such material as has been developed in the brief period since the original publication of his book, and he has likewise appended his concise and complete chapter on Technique so that the book answers every demand of student or physician as a text or laboratory manual. The companion volume on Pathological Histology is actively preparing. For the advantage of the students whose professors cover both Normal and Pathological Histology in their courses the original book presenting the whole cognate subject in a single pair of covers will continue to be published. For clearness of text and beauty of illustration no work surpasses that of Professor Dunham.

NORMAL HISTOLOGY. By EDWARD K DUNHAM, M. D., Professor of General Pathology, and Hygiene in the University and Bellevue Hospital Medical College, New York. New (2d) edition. In one very handsome octavo volume of 319 pages, with 244 illustrations. Cloth, $2.50, net. Philadelphia and New York: LEA BROTHERS & CO., Publishers, 1900.

F. P. N.

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THE demand for a revised issue of this manual in less than two years after its first appearance has been utilized by its authors to bring it thoroughly up to date without unduly altering its character and scope. Apart from a searching revision throughout, some twenty-five pages of new matter has been added, in which more extended consideration has been given to the Schwartze-Stacke operation and to the use of the normal saline solution in intravenous injections. An earnest effort has been made to render the pictorial features of the book more effective, the series being largely increased. Among the more notable additions reference may be made to a plate containing nine colored figures of the drum membrane in health and disease, and another showing the pneumatic cells and tympanic cavity. In its present form this volume promises to satisfactorily answer every purpose of the student and practitioner, and it will form an indispensable part of the library of the specialist in diseases of the ear, eye and throat.

A MANUAL OF OTOLOGY. By GORHAN BACON, A. M., M. D., Professor of Otology in Cornell University Medical College, New York. With an introductory Chapter by CLARENCE J. BLAKE, M.D., Professor of Otology in the Harvard Medical School, Boston. In one handsome 12mo. Volume of 422 pages, with 114 Engravings and 3 Colored Plates. Cloth, $2.25, net. LEA BROTHERS & CO., Publishers, Philadelphia and New York.

IN reviewing the first volume of this work we expressed the belief that the second would be one of even greater value, and would complete a system of surgery equal to the best in any tongue, it seems that our expectations were well founded—it is a superb volume and completes a magnificent work. The contributors to this volume are all among the foremost of American and English surgical educators, and in it they have done some of their best work. Dr. H. Tuholske did honors from our city, he having contributed the chapter on Surgery of the Scrotum and Testicles. The many former students of Dr. Tuholske will regret that his name does not appear over the wider range of subjects, we all feel that we get too little from his pen, but what we get is, as in this instance, in a high degree valuable. It would be difficult indeed to point out the individual strong points in a work of this breadth, and even more difficult to find place for improvement; the ground is so thoroughly covered, and so happily, that it seems to leave nothing to be desired; the illustrations are numerous, well chosen and helpful to an understanding of the text; it fared well at the hands of the publisher. Its popularity with medical men is a natural consequence.

T. A. H.

THE INTERNATIONAL TEXT-BOOK OF SURGERY, by American and British Authors. Edited by J. COLLINS WARREN, M. D. LL. D., Professor of Surgery in Harvard Medical School; Surgery to the Massachusetts General Hospital; and A. PEARCE GOULD, M. S., F. R. C. S., Surgeon to Middlesex Hospital; Lecturer on Practical Surgery and Teacher of Operative Surgery, Middlesex Hospital Medical School; Member of the Court of Examiners of the Royal College of Surgeons, England. Vol. II.—Regional Surgery. With 471 Illustrations in the Text and 8 full pages in Colors. Philadelphia, W. B. SAUNDERS & CO., 925 Walnut St. 1900. Cloth, $5.00, net. Sheep or Half Morocco, $6.00, net.

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PRACTICAL URANALYSIS AND URINARY DIAGNOSIS. A Manual for the Use of Physicians, Surgeons and Students. By CHARLES W. PURDY, LL. D., M. D., Queens University, Fellow of the Royal College of Physicians and Surgeons, Kingston, Canada; Professor of Clinical Medicine at the Chicago Post-Graduate Medical School. Fifth Revised and Enlarged Edition. With numerous Illustrations, including Photo-engravings, Colored Plates, and Tables for estimating total solids for Specific Gravity, Chlorides, Phosphates, Sulphates, Albumin, Reaction of Proteids, Sugar, etc., in Urine. Pages—406. Extra Cloth, $3.00, net. F. A. DAVIS COMPANY, Publishers, 1914-16 Cherry street, Philadelphia.

EACH new edition of Dr. Purdy's book more firmly establishes it as the best of books on this subject. In no other is the subject-matter put in so telling a manner; it covers the whole field of Uranalysis, the pages devoted to work with the microscope are especially attractive and instructive. No working library is complete without a copy of Purdy's Uranalysis.

T. A. H.

A TEXT-BOOK OF PRACTICAL MEDICINE. By WILLIAM GILMAN THOMPSON, M. D., Professor of Medicine in Cornell University Medical College, New York City, Physician to the Presbyterian and Bellevue Hospitals, New York. In one magnificent octavo volume of 1010 pages, with 79 engravings. Cloth, $5.00, net; leather, $6.00, net. Half Morocco, $6.50, net. LEA BROTHERS & CO., Publishers.

THIS volume is one of the best of the recent works on practice, though but lately out of press, its reception by the profession has indicated that they fully appreciate its worth and mean to make it all the author and publishers intended it to be—a standard reference and text-book. It comes from one who is recognized the country over as one of our most eminent physicians and teachers, in it he has succeeded in a remarkable degree in covering the entire field of modern medicine in a manner adapting it to satisfy the requirements of both practitioners and students. It proceeds upon the correct assumption that the proper object of medical science is to cure or aid the sick and prevent disease. To this end Professor Thompson has introduced the underlying science of causation, pathology, diagnosis, etc., sufficiently to ground the reader thoroughly and to enable him to apply with full knowledge the very complete therapeutic directions. The fashions of relegating this most vital part of a book to the background is foreign-born and unsuited to American practicality, hence this new work with its close adaptation to American needs is assured of immediate favor. Engravings, mostly from the author's collection are introduced wherever desirable, and the book is placed at a price within the reach of all, which indicates the confidence of its publishers in an unexampled sale.

Dr. Bartholow says that for the depression following influenza there is no remedy so effective as iodide of iron, which is best taken in the form of the officinal pill, one every four hours.

In small frequently repeated doses, bryonia relieves nervous excitation, lessens the tension of the arterioles, diminishes the frequency of the pulse, gives freedom to the circulation, reduces temperature and promotes waste excretions.

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AMONG THE MAGAZINES.

ONE of the strongest corps of artists ever maintained by a magazine will do the pictorial part of *The Ladies' Home Journal* during 1901. The list includes Edwin A. Abbey, Howard Pyle, A. B. Frost, W. L. Taylor, Solomon Solomons, Maxfield Parrish, Frank V. DuMond, Alice Barber Stephens, Will Bradley, Louis Loeb, Henry Hutt, Henry O. Tanner, the negro-painter; Reginald B. Birch, and ten or fifteen others. Some of the most prominent in the list will give their services exclusively to the Philadelphia magazine.

A VERY notable and timely project is begun in the October number of *Scribner's Magazine*. There is no factor in the Far East of greater importance than Russia, and just at this time the series of seven papers on "Russia of Today," by Henry Norman, will attract the widest attention. Mr. Norman is well known by his books on international politics and travel—among them "The Peoples and Politics of the Far East." He has traveled all over the world and is acquainted with its most important political personages. This series of articles on Russia is founded on a trip taken recently especially for *Scribner's Magazine*, and it included a journey over the great Trans-Siberian Railroad, with abundant opportunities to inspect the life of the people in Siberia. Mr. Norman also visited the Caucasus, and is now spending a month in Finland studying the peculiar conditions of that people, who are being denationalized by Russia. The whole series, from the present article on "The Two Capitals" (including a remarkable visit to Tolstoy), to the final papers on the political aspect of affairs, will be the most illuminating literature on the present crisis in the world's politics. The articles will be very richly illustrated from the author's photographs and from other sources.

THE OCTOBER CENTURY.—The situation in the far East is still a question of paramount importance throughout Christendom, and the October *Century* throws some very helpful lights and sidelights upon it. Most novel among these is "A Plea for Fair Treatment," by Wu Ting Fang, Chinese Minister to the United States. Few if any representatives of his race have Minister Wu's wide knowledge of the two worlds now in conflict on Asiatic soil, and still fewer have the ability to express their views in logical and vigorous English. Mr. Wu's terse and suggestive plea for fair treatment and forbearance is strongly reinforced by Bishop Potter, whose "Chinese Traits and Western Blunders," shows that on his visit last winter he took to China an open mind as well as open eyes. No less significant is paper a by Sheridan P. Read, formerly U. S. Consul at Tientsin, on "The Chinese as Business Men," in which the opinion is expressed that the present disturbing elements, both popular and official, would have yielded, even without foreign intervention, to conservative pressure from the Chinese merchant class and its following. Sidelights on the present position of affairs abound in "China's Holy Land," by Ernst von Hesse-Wartegg, a profusely illustrated account of a visit to the tomb of Confucius, and in "Chinese Education" (also illustrated), by Romyn Hitchcock; and of special timeliness in the same connection is an editorial on "International Hatred."

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Original Department.

PAPERS for the Original department should be in hand one month in advance, and contributed to THE MEDICAL FORTNIGHTLY exclusively. A liberal number of extra copies will be furnished authors, and reprints may be obtained at reasonable rates, if request accompanies the manuscript. Engravings from photographs furnished free.

Contributions, and books for review, should be sent to the Editors, 312 Century Building, St. Louis.

☞Signature of contributor, for reproduction, should be sent with every article, on a separate slip; use heavy ink, and allow autograph to dry without applying blotter.

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Rectal Affections with Especial Reference to the Methods of Examining the Rectum.

BY LEWIS H. ADLER, JR., M. D.,

PHILADELPHIA,

Professor of Diseases of the Rectum, Philadelphia Polyclinic and College for Graduates in Medicine, etc.

Clinical Lecture delivered at the Philadelphia Polyclinic and College for Graduates in Medicine.

GENTLEMEN:—We shall devote the hour to a consideration of some points of practical importance in the study of diseases of the rectum.

First of all, how shall a patient be placed so as to permit us to investigate a lesion of the terminal portion of the bowel? There are various postures in which this may be done. Some surgeons prefer the patient to lean over the back of an ordinary chair; others, to have him kneel upon a table or couch, with the patient's head placed upon his folded arms, by which means the buttocks are elevated and the intestines are allowed to gravitate from the seat of investigation; others, the lithotomy position (the patient upon his back, the buttocks brought well forward to the edge of the table, and the legs flexed upon the thighs and the thighs upon the abdomen); but for general use the most comfortable as well as the most delicate posture for the patient and that most convenient for the examiner, is for the patient to lie upon a firm couch, on the left side, the right shoulder turned away from the surgeon, the left arm brought behind the body, and the right thigh well-flexed upon the abdomen, the left lower extremity being kept extended and the buttocks being placed well on or over the edge of the table.

In examining for the presence of stricture or growths situated above the lower four inches of the rectum, the patient by being directed to stand

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and strain, will result in the diseased area being brought nearer to the anal outlet, so that at least an inch or more of the bowel may be explored than can be accomplished when the patient assumes the normal position, even though at that time, the patient be directed to bear down.

Regarding illumination of the parts, either natural or artificial light may be used. I prefer the former. By means of a head-mirror the operator sitting facing the light, and the patient's back being from the same, the light may be concentrated upon any particular point requiring observation.

Everything being in readiness for the examination, we first proceed to inspect the condition of the external parts. Upon separating the buttocks the orifice of the anus and the adjacent cutaneous surface are exposed. The radiating folds of the anus should be separated by the fingers, and excoriations and fissures should be looked for as well as for the presence of thread or seat worms. By passing the finger around the anus and making pressure any induration that exists will be detected; the induration may be due to a fistula or to an abscess. If the parts be covered with any discharge it should be cleansed and the source of the discharge traced, as to whether it be from an external opening of a fistulous tract, a stricture, etc. Eruptions of any kind, eczematous, syphilitic, or otherwise must also be noticed.

The next step is to make a digital examination of the interior of the rectum. It is by this means that the most important information is to be gleaned, and it is a procedure that should never be omitted in any case of presumed rectal trouble. Such an investigation is by no means agreeable to patient or to physician, yet without it the practitioner needlessly sacrifices his reputation and the patient's life is possibly endangered.

The medical attendant should not take it for granted, that because he sees hemorrhoids, or a fissure, or a fistula, that his diagnosis is complete, and omit the physical exploration of the bowel. Frequently rectal lesions are multiple, and a fissure is complicated by the presence of one or more polypoid growths. Often a stricture, benign or malignant, is associated with hemorrhoids and fistula.

The method of making the examination is as follows: The nail of the index finger of the right hand being well-trimmed, so that the sharp edges may not injure the delicate structures of the bowel, and the finger well-lubricated with carbolized oil, which I prefer to vaseline or similar substances, is introduced into the bowel by a slow boring motion, in a direction at first slightly forward, towards the abdomen. This should be done gradually, so as to allow the sphincters time to relax; if attempted too hurriedly or in too forcible a manner, spasm of the sphincter muscles will to a certainty be induced. As the finger enters the bowel, the relative strength of the sphincter muscles may be ascertained by the power of resistance offered, and this resistance will be found to vary greatly in different persons. In the aged or debilitated it is apt to be very weak, and in the strong and healthy just the reverse. In a certain number of instances you will find an entire absence of an internal sphincter muscle. I have noted

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such a condition in over a dozen cases. It is probably to be accounted for by a lack of development of the circular fibres of the muscular coat of the bowel, which as you may recall, in the normal condition of affairs, aggregate at this point, and compose the internal sphincter muscle.

In persons of a specially nervous tendency and in cases of irritable ulcer of the rectum (so-called fissure), a contraction of the sphincter may be met with, which owing to the pain will render an examination impossible without recourse to an anesthetic. Congenital contraction of the anus may also exist. Within the lower inch or inch and a half of the bowel, we should be on the alert to recognize the presence of ulceration, or the internal opening of a fistula—both of which may be detected by the educated finger from the induration usually present.

The finger should now be passed its full extent up the bowel, unless an obstruction, such as a stricture or a polypoid growth exists and prevent its passage. By instructing the patient to strain or to bear down forcibly, the rectum can be explored for a much further distance than otherwise would be possible. Additional length may be gained by passing the remaining fingers of the examining hand backward along the intergluteal groove, instead of closing them in the palm, as is generally done, and pressing the knuckles against the soft parts — the knuckles, when folded, prevent the full passage of the index or examining finger. In this manner about three and a half or four inches of the rectum may be explored, together with the prostate, the neck of the bladder, the uterus, the anterior surface of the coccyx and the lower part of the sacrum, the ovaries and the tubes, and the broad ligament. With an exceptionally long finger it may be possible to feel the seminal vesicles and the vas deferens.

Malignant infiltration, or stricture, can be detected, if situated within reach. By sweeping the finger around the mucous membrane, its condition can be noted; a general smoothness and absence of the normal folds indicating atony. Ulceration may be recognized, but the higher it is situated the more difficulty will be experienced in detecting it. The attachment of polypi can be felt, but in examining for their presence, it is important that the finger be brought from above downward, as otherwise the growth may be pushed out of reach, owing to the length of the pedicle, which is often considerably elongated. Fecal masses in the rectal pouch can be recognized without difficulty.

Having completed our digital examination we can now supplement the same by asking for such information as can be derived from the patient. I am not in the habit of wasting much time prior to the examination of the bowel, in attempts to question the patient. Experience has taught us that valuable time is saved by examining the patient first, and then basing the questions upon the knowledge thus obtained. However, it must not be forgotten that a patient coming to a strange physician is more or less nervous, and that time spent in gaining their confidence is of decided advantage; for this reason I always allow the patient to tell the history of the case, especially if the patient be a woman.

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The trend of the questions to be asked a patient are to be based, as intimated, upon the results of the digital examination. Usually we start the interrogation by asking of what the patient complains? In case this is not understood, we supplement the query by asking what caused them to seek our advice? Next we ask in what manner the trouble manifested its presence, and how long a period it has existed. Then we inform ourselves as to the presence of pain, its character and situation, as well as its relation to the act of defecation. Whether there is any itching present.

If a protrusion occurs at the anus, and if so, when; its relation to the action of the bowels. Also if it be constantly present, or can the patient replace it. If a discharge occurs and its character. Whether bloody, mucus and purulent, and has it any odor. Is the patient costive or otherwise. The consistency and the shape of the passages of fecal matter.

Finally, the following general interrogations should be made: Does the patient cough, have night sweats, spit blood, or has there been a loss of flesh? What are the habits of life, especially with reference to the use of alcoholic liquors, tobacco, and indulgence in venery? Is there any specific history? Lastly, inquire as to any hereditary tendency to rectal trouble, malignant disease, kidney, liver or heart affection. In women inquire into the condition of the sexual organs, etc.

We shall take another opportunity to discuss the use and method of employing specula in the examination of the rectum and the sigmoid flexure.

1610 Arch Street.

Symptoms and Diagnosis of Small-pox (Macdonald, *Med. Dial*, April, 1900).—The stage of incubation lasts from eight to fourteen days, the only symptoms being malaise and catarrhal inflammation of the pharynx. Invasion is marked by a chill or rigor. Pain in the back is a prominent symptom. There may be headache, pain in the limbs, delirium, paraplegia, etc. Digestion is greatly disturbed, nausea and vomiting being present. In adults there is constipation, in children diarrhea. The pulse is rapid and may be weak and dicrotic, the temperature rising with it. On the third day the eruption appears, first on the forehead, face and wrists, then on trunk, and lastly on limbs, and the other symptoms subside. The eruption consists at first of maculæ or hyperemic spots changing to papules on the second or third day, vesicles on the fourth or fifth, and developing into pustules on the sixth or seventh, at which time a rise of temperature occurs. These are umbilicated and depressed at the summit, and are of great diagnostic value. They continue for about three days, and break, forming crusts and emitting the characteristic odor, after which desquamation takes place with the formation of pock marks. The differential diagnosis from chicken-pox is as follows: Chicken-pox occurs very rarely after the tenth year; there are no preliminary symptoms, the eruption, which appears on the back, neck and chest, being the first evidence of the disease; the vesicles are superficial, contain only serum and vary in size; fever occurs only when the eruption is on, and there is no secondary rise in temperature, the mortality is nil.

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Diseases of the Stomach.

BY J. M. G. CARTER, M. A., M. D., SC. D., PH. D.,

WAUKEGAN, ILL.,

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[CONTINUED FROM PAGE 532.]

Distention of the Stomach with Water.—Perhaps the best method of distending the stomach for the purpose of determining its size and location is to fill it with water. This can be done by the means of the stomach-tube and the amount of water measured before being introduced or after withdrawal. The introduction of a quart (1 litre) of water will often be sufficient. If the stomach be found to hold more than 56 ounces, about two and one-fourth quarts (2¼ litres) it is abnormally large, and the cause of the dilatation should be sought.

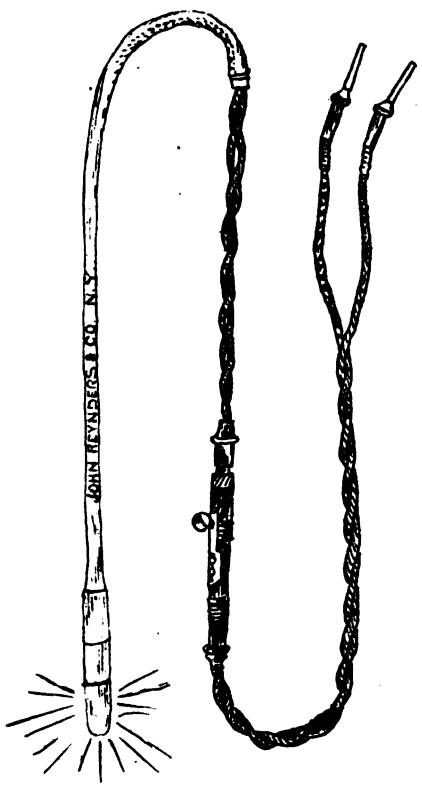

FIG. 4.—The Gastrodiaphane.

Gastrodiaphny.— Gastrodiaphny, or the examination of the stomach by means of an electric light introduced into the viscus, has not yielded entirely satisfactory results up to the present time, and an elaborate description of the process is not required. This examination is made by means of an instrument called the gastrodiaphane (Fig. 4), and in skillful hands serves to show the outlines of the stomach with considerable exactness, and may be of value in locating tumors in the gastric walls.

It is expected that the Roentgen ray will be of much value, especially in locating tumors and discovering foreign bodies in the stomach.

The gyromele (Turck, Fig. 5), consisting of a revolving wire cable, to which is attached a sponge, is frequently valuable as an aid in determining the outline and size of the organ. The sponge may withdraw mucus, bits of mucosa, bacteria, etc., for examination.

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A complete examination of the gastric contents may at times requir extensive laboratory facilities and a skillful knowledge of bacteriology. I cases of poisoning many chemical tests may be necessary to complete th diagnosis. Microscopic examination may be required, and skill in the us of the microscope may be essential.

The presence of bile and intestinal juice are often met with in small quantities in the gastric contents; if this occurs in considerable quantities the condition is abnormal, as in the relaxation of the pylorus or in stenosis of the duodenum below the mouth of the bile duct. The presence of bile is recognized by the golden yellow or greenish color. To determine the presence of intestinal juice, proceed as follows:

1st. Mix the filtrate with 1 per cent solution of carbonate of sodium until it has a distinctly alkaline reaction. A flake of fibrin is then added to the filtrate, which is kept warm for some time. The fibrin dissolves by the action of the trypsin.

2d. Amylopsin will change the starch into maltose.

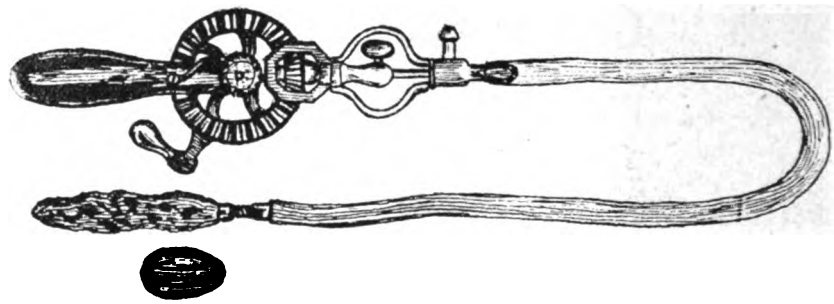

FIG. 5.—Turck's Gyromele.

3d. To a small quantity of milk add one drop of blue litimus tinctur and 3 c.c. of the neutralized filtrate; keep at temperature of 100. Th milk becomes slightly reddish.

The presence of blood may be detected by the spectroscope, or by Heller's blood test.

Pus is seldom found in the contents of the stomach, and when present should be detected by the use of the microscope.

Fragments of Mucosa.—It often happens after lavage bits of gastri mucosa are found in the wash-water; they are sometimes found also in th gastric contents when examining patients after the test-breakfast. We ar largely indebted to Boas, Hemmeter and Einhorn for our knowledge in thi matter. The number of pieces found in such circumstances vary—som e times one, sometimes four or more. They occur in some cases of diseased conditions of the mucous membrane, erosions, ulcerations, and also in certain cases where the mucous membrane is especially delicate, and in other cases where injury of the mucosa has occurred—as by the introduction of an instrument. These pieces of mucosa are usually quite red, vary in

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thickness from one-half to one mm., and may vary in size from a pin's head to a small bean. Not infrequently they may be found imbedded in mucus. They may be examined fresh, or after hardening in alcohol, imbedding in celloidin, and staining with eosin, hematoxylin, picro-carmine, methyline blue and thionin. For a thorough examination the preparation must be hardened. Sometimes the pieces are normal in appearance—glands and interglandular tissue existing in normal proportions. Sometimes the connective tissue around the glands is more marked. Again, there may be marked proliferation of glands. Sometimes there is beginning of atrophy; a complete atrophy is sometimes observed. Often a condition of what is termed vacuolization occurs, a result of mucoid degeneration of some glandular cells; in this condition vacuoles of different shape extend throughout the glands. Sometimes the specimens show characteristics belonging to two of these groups.

Fragments of Tumors.—In the stomach contents after test-meals and in vomited matter often, as well as in wash-water after lavage of the stomach, particles of tumors are sometimes found. It requires a careful microscopic examination to determine whether these particles are cancerous or not. These pieces are most frequently obtained in cases of cancer of the cardia. The peculiar cell-nests, characteristic of cancerous growths, must be distinguished from groups of normal cells and cell tissue found in wash-water.

CHAPTER III.—LOCAL TREATMENT OF THE STOMACH.—LAVAGE.

The use of the stomach-tube in the treatment of gastric affections has become so common that it is necessary to call attention to the dangers, as well as to the advantages, of its use, and to study its scientific application.

During the last twenty years it has gained in favor, and diseases of the stomach have been so thoroughly investigated by means of this instrument and the chemical analysis of the stomach contents, that great advances have been made in the diagnosis and treatment of gastric diseases. It requires skill and patience to know when it should not be used, and to wait for the slower processes of other methods of treatment.

It is well, then, to mention briefly some objections to, and dangers accompanying its use. Some degree of alarm is occasionally felt at finding portions of mucous membrane attached to the tube when it is withdrawn from the stomach. Especially is this likely to be the case with those using stiff instruments. It may occur also with the soft tubes. Where the patient's mucous membranes are thin and easily irritated, and where the epithelium is more readily removed than seems normal, I dislike to use the tube. In such cases abrasions are likely to occur, and although there is a tendency to rapid healing under such circumstances, the possibility remains that some cases may not heal, and the traumatism may lead to ulcer of the stomach. The possibility of such an occurrence should suggest a careful investigation of the mucous membrane before the introduction of the tube. Another danger is that perforation of the esophageal or gastric wall sometimes occurs. The possibility of this accident should be remembered in stenosis of the cardia or esophagus, in ulcer of the stomach, and in the later

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stages of gastric cancer. This accident has occurred in very skillful hands, and it is not to be lightly viewed. Such cases have been reported by Abercrombie, Frerichs and others.

Contraindications.—I should consider the stomach-tube contraindicated in stenosis due to the presence of aneurism or abscess, and in cases accompanied by degeneration of the tissues above the stricture—a matter, however, which could not be easily discovered before death. In ulcer and the later stages of cancer of the stomach the danger of perforation is sufficient to contraindicate the use of the tube except in rare instances.

An objection to the use of the tube in inflammation or congestion, in ulcer, and in altered conditions of the mucous membrane is the fear, even the probability, of causing hemorrhage. These hemorrhages are not always manifested as a sudden hematemesis, but may by causing an abrasion of the mucous membrane or rupturing a small vessel, produce an oozing or slow hemorrhage, sometimes shown only by darkened or blood-stained stools. However, an alarmingly profuse hematemesis may occur, and the possibility of this accident should be eliminated or reduced to the minimum by extreme caution in such cases.

The fact that syncope and death have resulted from the use of the stomach-tube is a matter of considerable interest and great importance. The varying pressure upon the great abdominal plexuses of the sympathetic produced by filling and emptying the stomach with the tube is believed by Fenwick to be the cause of this accident. The indiscriminate washing out, and filling of the stomach with quantities of water are to be avoided.

Besides the evil results which may occur from pressure upon the sympathetic plexuses, it is undoubtedly true that the mere irritation of the mucous membrane in the stomach by the presence of the tube may produce fainting or syncopic attacks, as also occurs occasionally when food is introduced into the stomach, These cases seem to occur under circumstances where the irritation would ordinarily produce vomiting, but some idiosyncrasy causes the syncope instead of nausea, or perhaps both sensations may be experienced.

Spasm and tetany are sometimes met with, and the latter may prove fatal. Manges gives 72 per cent as the mortality in cases of tetany. Although few cases have been reported as compared with the great number of times the tube has been used, still precaution is urged, as we do not know in advance what patient may die from this complication. The spasm of the throat is very common, and in many cases requires the use of cocaine. Spasm in children may prevent the use of the tube, except under chloroform or ether.

Another objection to the use of the tube, which has been considered by some even more serious than those already mentioned, is the removal of the natural secretions by lavage. The habitual washing out of the stomach, when considered from this point of view only, undoubtedly is to be discouraged. The withdrawing (from the body's nourishment) of the chyme which the stomach labors so hard to manufacture is not to be con-

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sidered lightly; but if the digestive and absorptive powers of the viscus are impaired it cannot be known that undigested food does not remain in the stomach until it acts as a foreign body. If relief is afforded the patient by the use of lavage, it may be accepted usually as evidence that good has been accomplished. Still it must follow that no general treatment by lavage should be adopted until careful investigation has shown that the benefits to be derived outweigh the risks assumed.

Again, when lavage has accomplished its work it should be stopped. Further use may prove to be a positive evil. I know a case where a young lady was advised to use the stomach-tube for nervous or functional dyspepsia. She submitted to the treatment by a young physician who was very enthusiastic in his work. The patient improved for a time. At this point a conservative physician would have stopped the treatment. The lavage was persistently continued for months, however, the case growing worse; and after a year of such treatment the too submissive patient was not so well as she was when the lavage was commenced.

Such instances of indiscretion in the use of any remedial agent, while suggesting caution, do not militate against the value of the measure when properly used.

Indications for Its Use.—I should advise the use of the tube for the purpose of lavage or washing out the stomach for the following six objects:

(1) To remove undigested food and foreign matters; (2) to cleanse the mucous membrane for the action of medicines; (3) to check hemorrhage; (4) to give antiseptic douchings; (5) for sedative purposes; (6) for general tonic effects upon the gastric mucous membrane and parieties.

(1) The removal of undigested foods may become necessary in indigestion, functional dyspepsia, dilatation, cancer and pyloric stenosis. In such cases nothing can be done until the stomach has been relieved of the offending matter. Frequently in some of these cases vomiting cannot easiiy be induced, and in others it is not to be encouraged. It is a common experience that no treatment gives such temporary relief in functional dyspepsia, dilatation, early stages of cancer and benign stenosis as lavage. This removes the undigested remnants of food, fermentative and putrefactive products, and exercises a beneficient tonic influence upon the gastric mucous membrane.

(2) In atrophy, chronic gastritis, and also in functional dyspepsia, as in other neuroses, washing the tenacious mucus from the membrane gives a surface by which medicines are more readily absorbed. There is no doubt that tardy recoveries or entire failures in the treatment of some neuroses, including atonic or nervous dyspepsia, are due in part to the failure of the gastric mucous membrane to absorb the medicines prescribed. This occurs often where the absorptive function is not materially impaired. Such cases can be explained by supposing that the tenacious mucus on the mucous membrane interferes with the process of absorption. The removal of this mucus will facilitate the action of the medicines which are given.

(3) The application of cold is a common method of controlling hemorrhage. Ice-cold water can be applied to the mucous membrane of the

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stomach in hematemesis in two ways. First, the patient may be required to drink ice-water or swallow bits of ice. The quantity which can thus be used is limited.

Second, it frequently happens that hemorrhages occur in ulcer and other pathological conditions under circumstances which do not forbid the use of the stomach tube, and where a prolonged application of cold to the gastric surface is desirable. In such conditions one is justified in applying a douching by withdrawing the water after it has been in the stomach four or five minutes and reintroducing a supply of iced or cold water to be again withdrawn in the same manner. This process may be continued as long as necessary, if no untoward symptoms arise from the prolonged use of cold. In ulcer, cancer and ulcer of vessels of considerable size danger may attend the expression method of emptying the stomach; hence it is wise to use an aspirator or exhausting bulb, or Friedlieb's tube to remove the water. Hot water (115°–120° F.) may be used for the same purpose and in the same way.

(4) One of the most simple and advantageous uses of the tube is for

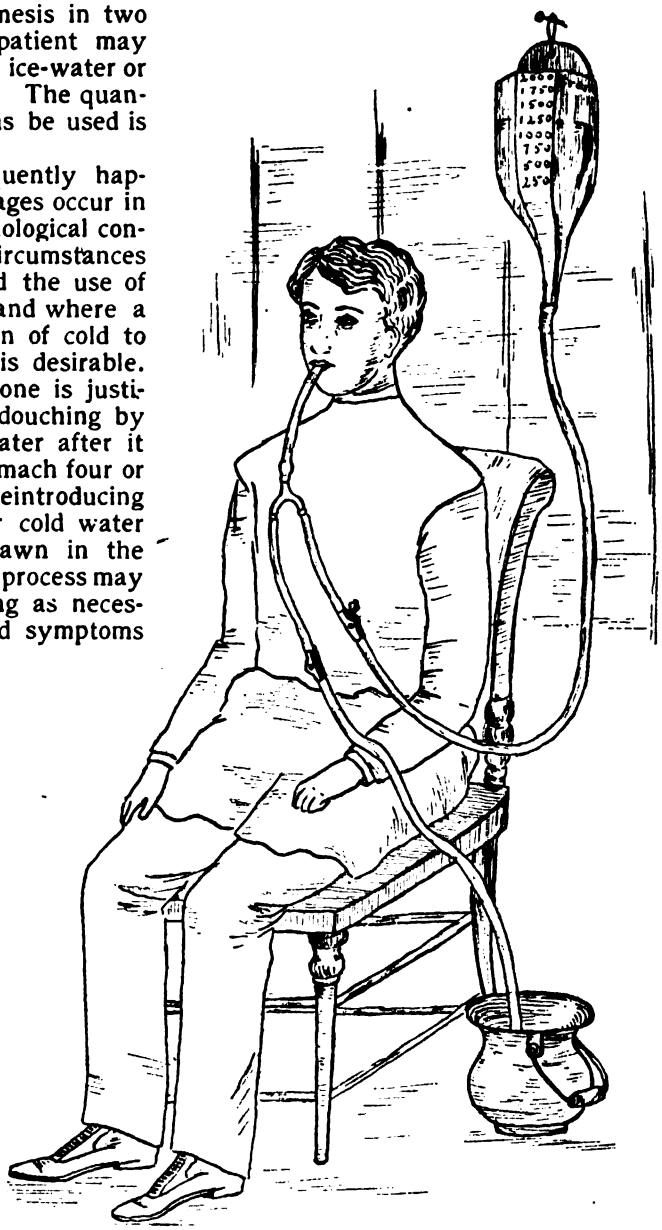

FIG. 6.—Leube and Rosenthal's Apparatus.

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the purposes of removing the products of fermentation and putrefaction. In all diseases where fermentation occurs, as in functional dyspepsia, certain other neuroses, dilatation, chronic gastritis and cancer of the stomach, the gases and other products of faulty digestion, act as irritants, and and nothing relieves the patient as well as lavage. In many of these cases, especially nervous dyspepsia and gastrectasis, and often in chronic gastritis, lavage not only serves to give temporary relief, but is also an excellent therapeutic agent in accomplishing a permanent cure.

(5) Perhaps no class of diseases of the stomach is so generally benefited by lavage as the neuroses. Functional dyspepsia has already been mentioned. Gastralgia, nervous eructation, hypersecretion, the various conditions accompanying neurasthenia and nervous vomiting are frequently thus relieved, the depraved condition (if one exists), which allows these states to arise, removed, and a gentle tonic influence imparted to the gastric mucous membrane. The *impression* made upon the general nervous symptom, the quick response of the sympathetic system, and the increase in the circulation, and consequently the improved general metabolism are without doubt some of the most important effects of washing out the stomach in these cases. The readiest means of relieving obstinate hiccough, heartburn and other symptoms of gastric irritation may often be found in the use of lavage.

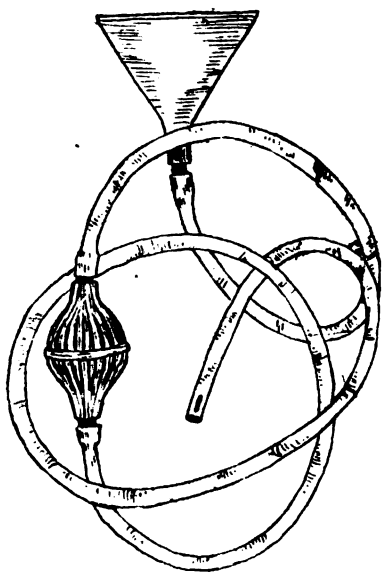

FIG. 7.—Friebileb's Tube.

Nevertheless, there are some neurotics who cannot submit to the lavage treatment on account of syncopic or other distressing symptoms.

(6) It cannot be doubted that cold or tepid bathing, and sometimes hot bathing, produces general tonic effects. Similar effects are often observed in the lavage treatment of the stomach—bathing or washing that viscus.

The use of lavage in children is very satisfactory in some cases of indigestion, chronic gastritis, dilatation of the stomach and poisoning. Frequently the tube (a large catheter) may be passed very successfully through the nose.

A very convenient apparatus for office or home treatment is that of Leube and Rosenthal (Fig. 6), which consists of a large glass fountain irrigator attached to a Y-shaped glass tube, which makes the connection between the irrigator and drainage tube on one hand and the stomach-tube on the other. By compression alternately on the irrigator tube and the drain-

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age tube the stomach can be emptied and filled at will. The process can be repeated until the wash water comes away clear.

Friedlieb's tube (Fig. 7) is very simple and more convenient for outside work. It consists of an ordinary single stomach-tube with a syringe

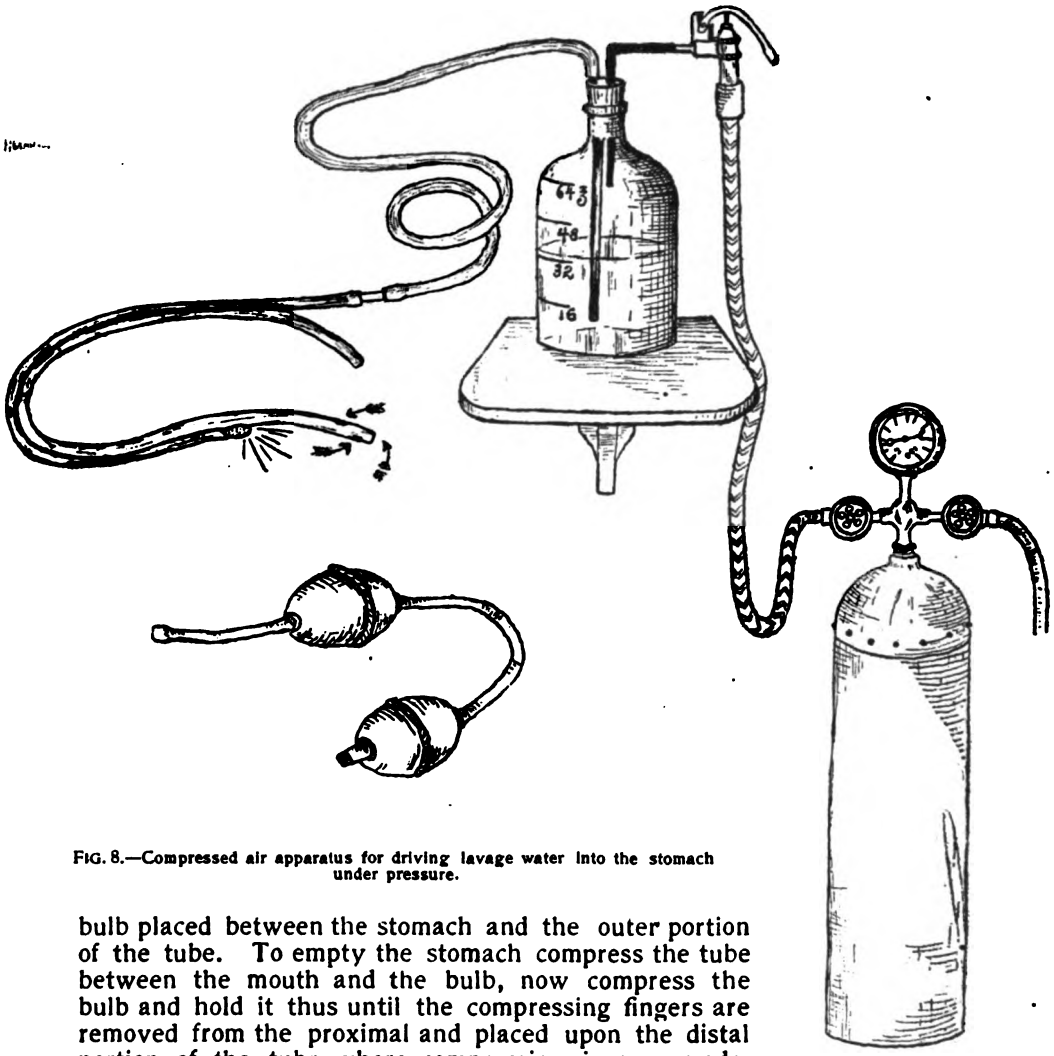

FIG. 8.—Compressed air apparatus for driving lavage water into the stomach under pressure.

bulb placed between the stomach and the outer portion of the tube. To empty the stomach compress the tube between the mouth and the bulb, now compress the bulb and hold it thus until the compressing fingers are removed from the proximal and placed upon the distal portion of the tube where compression is now made. Now remove compression from the bulb. This procedure will draw the contents from the stomach to fill the bulb. Replacing the fingers on the proximal side of the bulb and compressing, the bulb may be squeezed and the contents driven out. Reversing this process will enable one to

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force water into the stomach when it does not pass freely. This is often useful where for any reason the siphon method cannot be easily practised.

The double current tube is occasionally advantageous, particularly if the stream is driven under air pressure (Fig. 8), or gravity (Fig. 9) to keep a continuous flow. The fountain syringe or Leube-Rosenthal apparatus may be attached to the double tube. The needle spray is advantageous in some cases, but usually the plain double tube used as here explained is quite sufficient.

The simple, single tube is quite satisfactory and the siphon method all that is needed in most instances. The amount of water required depends upon the condition of the

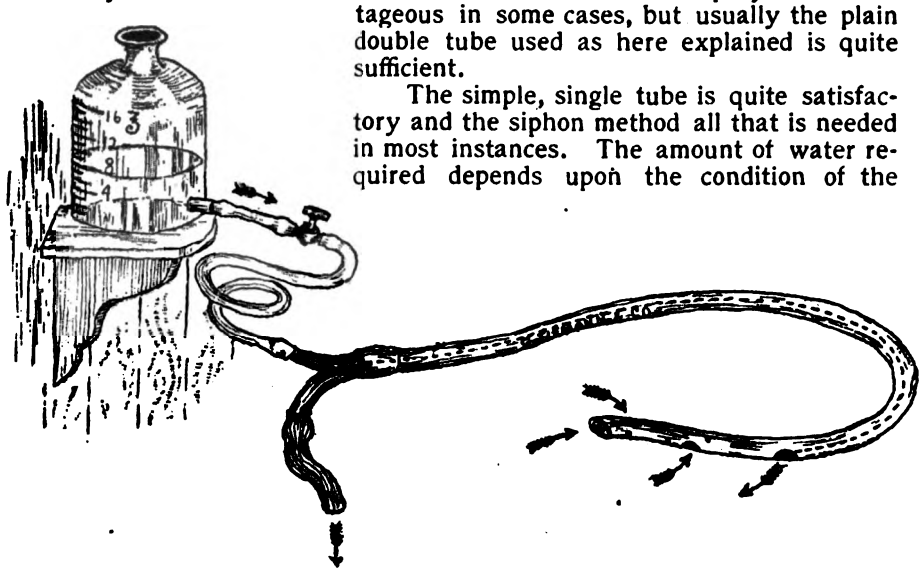

FIG. 9.—Hemmeter's Apparatus.

stomach and the object of lavage. Antiseptic solutions may be used in the same manner. The tube should be introduced rapidly, but not with such great haste as to injure the delicate tissues. The tube may be oiled or dipped in warm water. The patient should be advised to breathe deeply during the entire procedure.

Spraying the stomach is desirable in some instances. This may be done by an atomizer (Fig. 13), which drives the spray through a tube, or Turck's needle spray (Fig. 10).

FIG. 10.—Turck's Needle Spray.

The essential oils may be nebulized and used in a similar manner by the apparatus represented in Fig. 14.

Massage and hydrotherapy occupy an important place as methods of treatment in diseases of the stomach; but rest is one of the most important elements of treatment. Without this in many cases other methods of therapeusis fail.

[TO BE CONTINUED.]

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Visceral Ptosis.

BY BYRON ROBINSON, M. D.,
CHICAGO.

THE pelvic and abdominal viscera are liable to frequent dislocation (prolapse). The neuro-vascular visceral pedicle, the mesentery, glides distalward on the dorsal abdominal wall, and becomes elongated. The distalward dislocation of the dorsal attachments of the mesentery allows: (a) Elongation of the mesentery. (b) An excessive range of visceral motion. (c) The abdominal and pelvic organs pass distalward and crowd into the pelvis. (d) Visceral ptosis compromises circulation, deranges secretion and traumatizes nerve periphery. (e) It produces especially indigestion and constipation. (f) Visceral ptosis is chiefly from a defective nervous system, of neurotic origin. (g) It increases every decade after thirty-five years of age. (h) It is liable to cause kinking or partial obstruction of the tractus intestinalis, from traction of one part and elongation of the remaining part of the mesenteries.

The effects of visceral ptosis (Glenard's disease of 1884) on individual abdominal organs are varied and numerous.

The tractus intestinalis in visceral ptosis is affected chiefly by: (a) Compromising of circulation, i. e., congestion and decongestion. (b) Trauma of nerve strands and nerve periphery. (c) Complication from loss of peristalsis and atony of bowel muscle. (d) Gastro-intestinal catarrh and indigestion from excessive, deficient and disproportionate secretions. Also dragging the abdominal brain produces nausea and neurosis. (e) Dilatation of the stomach caused by the superior mesenteric artery, vein, and nerve obstructing the duodenum at the point where it crosses the transverse segment. The stomach is especially liable to dilatation from the above cause, where the prolapse of the enteron enteroptosis, is sufficiently advanced to allow the enteronic loops to descend into the lesser pelvis, and particularly when the subject lies on the back, for then the superior mesentery artery, vein and nerve are put on a stretch, and they constrict vigorously the transverse portion of the duodenum. (f) The enteronic loops being dislocated (enteroptosis) in the pelvis, peristalsis, secretion, circulation and nerve periphery are compromised, followed by catarrh and indigestion. (g) The colon, especially the colon transversum may lie in the lesser pelvis producing similar compromising circumstances, as in the enteron. (h) The appendages of the tractus intestinalis, in visceral ptosis are compromised in circulation, secretion and nerve periphery.

In visceral ptosis the genital tract suffers, especially, in circulation and nerve periphery as well as secretion. Uteroptosis may arise to such an excessive degree of mobility that the uterus may be pushed above the umbilicus and in any portion of the greater pelvis.

The urinary tract suffers in visceral ptosis chiefly from dislocation of the kidney (right), nephroptosis. From several hundreds of abdominal sections and autopsic inspections, I can say that in many subjects the kidney (right) has a motion and range of four inches, two inches proximal-

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ward and two inches distalward. Large number of subjects have a right kidney range of three inches. The mobility of the right kidney is of extreme importance in gynecology, as its symptoms mimic or simulate genital disturbances. In my practice 60 per cent of multipara have a movable kidney. The mobility of the right kidney is due to: (a) The longer right renal artery. (b) The liver through the diaphragm forces the right kidney distalward. (c) Muscular trauma of the diaphragm, quadratus lumborum and tight lacing. (d) Absorption of pararenal fat. (e) The abdominal cavity of woman is funnel-shaped, with the big end of the funnel distalward, and hence the kidney receives less support below than it does in man. (f) Subinvolution attacks the kidney, as both genital and kidney arose from the wolffian body, and what affects the genitals will affect the kidney. An excessively mobile kidney (nephroptosis) produces neurosis, pain, nausea and indigestion. To diagnosis mobile kidney the patient should be examined in the dorsal position and in the reclining position. Relatively few mobile kidneys of women need nephropexy, which should be performed not for mobile kidney, but for mobile kidney accompanied by pathologic symptoms, pain, nausea, indigestion and neurosis.

The essential treatment of visceral ptosis is: (a) Abdominal support. (b) Drainage of bowels, kidney and skin. (c) Correcting diastasis of the recti abdominales by suturing them together. A well-fitting abdominal supporter will practically cure the vast majority of cases.

Gonorrheal Rheumatism.—The following treatment is recommended in gonorrheal and other forms of articular rheumatism: Order patient to take five grains of Cystogen in a glass of water four times a day and apply the following locally as an unguent:

Acidi salicylici	1½ drms.
Olei terebinth	2 drms.
Lanolin	½ drm.
Adipis	3 drms.

To be rubbed in thoroughly several times a day.

Papillomata of Penis.—In the case of vegetations multiple and sessile on the glans penis and foreskin, Dr. Silbromintz (*Rev. de San. Militar*) recommends the growth to be surrounded with a layer of muslin or cotton-wool, then to be carefully washed with Hoffman's liquor, and afterwards painted with the following:

Collodion, flexible	80 parts
Resorcin	22 parts

Mix.

After a few applications the warts fall off, leaving a small excoriation, which rapidly heals under a few applications of the following powder:

Carbonate of zinc	9 parts
Subnitrate of bismuth	9 parts
Resorcin	2 parts
Talc in fine powder	80 parts

Mix.—*Med. Age.*

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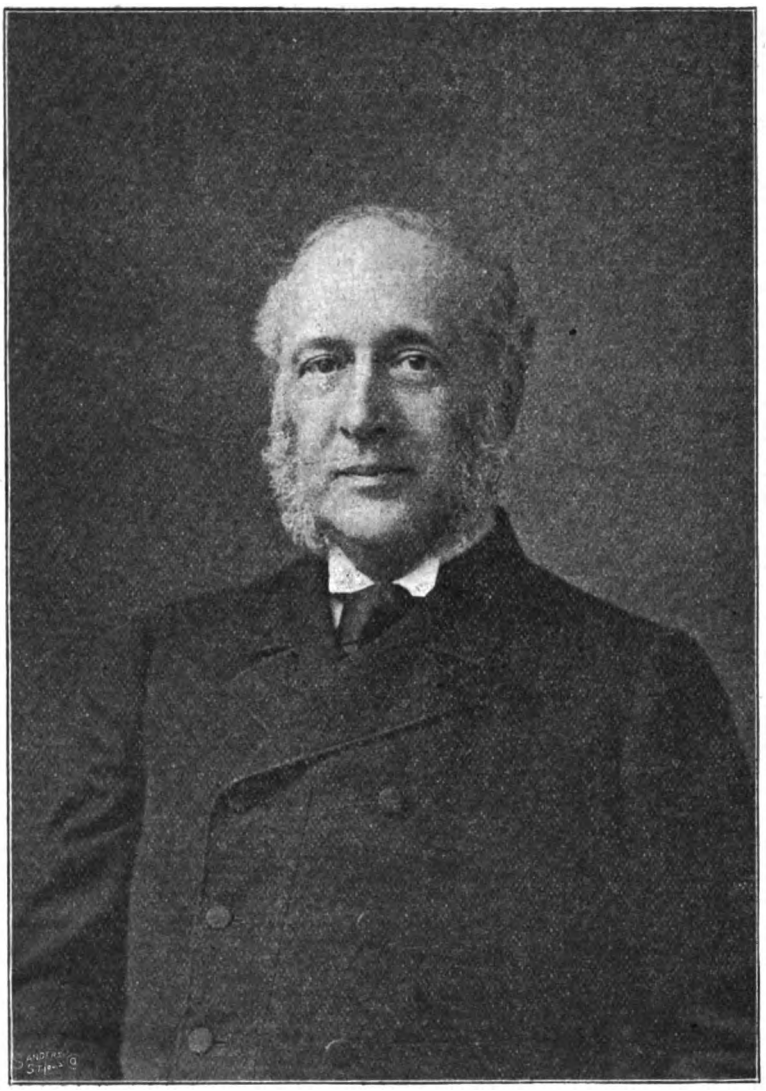

JACOB M. DACOSTA, M. D.

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Jacob M. DaCosta—A Sketch of the Man.

BY M. V. BALL, M. D.

WARREN, PA.

ONE of the last of that celebrated group of Philadelphia doctors has just passed away, dying, as most of them have, in harness, working almost to the very last. Jacob M. DaCosta died on September 11th, at the age of 67 years; died like Wm. Pepper, suddenly and from disease of the heart.

Gross, the elder and younger, Pancost, the elder and younger, Agnew, Ashurst, Pepper and DaCosta, these are the men who have made Philadelphia famous as a medical center for the past thirty years; these are the men whose teachings are engrossed upon the minds of the great majority of America's leading medical men of today. Thousands have graduated from this city during the period these men were active as teachers, and these thousands never will forget the strong personal influence they exerted.

Other teachers there were; other men in other colleges capable and famous, but somehow between 1865 and 1890—twenty-five years—the light came from Philadelphia alone, at least its exceptional brightness seemed to obscure all other flames. Today Philadelphia is but one of the great centers. New York, Baltimore and Chicago are fighting for supremacy, and Philadelphia has had to enter the contest unwillingly to retain a part of her former prestige.

DaCosta, the scholar; DaCosta the first American to place the art of physical diagnosis and pathology on the plane it had reached in Europe, and one of the first American medical writers to have his book noticed and translated into other languages. He was an American by adoption, having been born in the West Indies, on the Island of St. Thomas.

He was small in stature, with black, twinkling eyes and an expression most gentle and kind, with a smile ever ready for his associates and acquaintances. He seldom laughed or joked; he never loitered, and yet was never in a hurry. There was a calmness about all his actions that nothing could dispel. Pepper was a gentleman, but Pepper seemed on the go continually. Pepper received you in his office amidst a basketful of letters, and between your answers to his questions he was dictating a letter to his stenographer to some correspondent in Brazil. You felt in Pepper's presence as if your own troubles were so very, very insignificant compared to the universal affairs that he was busied with. But with DaCosta there was the careful, slow, deliberate examination, the case history, the quiet of his large office with nothing but shelves of books to overhear you. And in the lecture-room what a delight, what a period of rest was the didactic lecture of DaCosta; every word distinct, every sentence polished, the accent just Spanish enough to make the sentences full of musical cadence. As I look over the notes I took when listening to him some thirteen years ago, they read as finished as if I had revised them for publication,

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or copied them in short-hand. And his clinical lectures, there was meat for you; never unnecessary detail; never disregard of the patient's body or feelings; never slighting of treatment.

DaCosta was not a man that one could be very familiar with; he had, I believe, very few intimate friends. He was not a politician, as Pepper was. He seldom schemed or had any interests to further other than those that pertained to medicine pure and simple.

He was not a money-getting man. Once when I questioned the wisdom of his taking very small fees from some patients that I knew could afford to pay more, he told me that foreigners were often in the habit of placing money in his hands, and he dared not look at it, because he felt that often they could not spare even the smallest fee. Consequently, his services were sought for by the very poor, who would pay him, perhaps, only a trifle more than their neighborhood doctor, but whose opinion they rightly valued very highly.

Others will speak of the offices he filled, of the papers and books he wrote, I only write of DaCosta as the average Philadelphia doctor, who graduated under him, learned to know him. He was in all things a great man; with a private practice probably second to none in America, he was never too busy to be polite, or to refuse to answer at length questions asked him. He shall be revered by those who knew him, not as a genius, not as a friend, but as the quiet, sober expounder of truth, the teacher above all else, and as a splendid example of a pure physician without the slightest taint in his character of sordidness, of false ambition, or of variety.

Success was his quite early. He started his medical career with an exceptionally good foundation; a classical education obtained in Germany to begin with, a good knowledge of European languages besides, and a post-graduate course in the hospitals of Paris and Vienna, having graduated at Jefferson Medical College before he was 19. Very few in his day had this preparation, and when he returned to America in 1854, he was not long in coming into prominence.

And DaCosta has never grown old. His ear and his hand lost not their cunning, and his reputation for careful diagnosis never waned. Fortunate it is that death found him with all his powers active, for there is nothing so sad as to grow old and not be aware of it, to be passed in the race by every young popinjay, to have your best friends pity your failing powers, and yet yourself believe that you are as fresh as you ever were. DaCosta died before he could be shelved. That which we called DaCosta is no more, but the light which inspired him and which was reflected through him has inspired thousands, and the image reflected, though seldom resembling his reflection, yet longs to shape itself in accordance with his, and this striving and this longing is his work, for which he will be given due credit. In that wonderful and long list of famous physicians that Philadelphia has been proud to call her own, none will have a more honored place than Jacob M. DaCosta.

When you desire to stimulate the heart sip water as hot as can be swallowed.

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Reports on Progress.

COMPRISING THE REGULAR CONTRIBUTORS OF THE FORTNIGHTLY DEPARTMENT STAFF

GENERAL SURGERY.—C. E. Black, M. D., Jacksonville, Ill.

DISEASES OF THE CHEST—W. W. Bulette, M. D., Pueblo, Colo.

INTESTINAL AND RECTAL SURGERY —S. G. Gant, M. D., New York City

DISEASES OF THE MIND—Frank C. Hoyt, M. D.

RHINOLOGY AND LARYNGOLOGY—John A. James James, M. D.

GENITO-URINARY SURGERY AND SYPHILOLOGY — Bransford Lewis, M. D.

OPHTHALMOLOGY—J. Ellis Jennings, M. D.

ORTHOPEDIC SURGERY — Phil. Hoffman, M. D.

GYNECOLOGY—Josephine Milligan, M. D., Jacksonville, Ill.

OBSTETRICS—R. B. Murphy, M. D.

MEDICINE — Frank Parsons Norbury, M. D.

CLIMATOLOGY—Hubert Work, M. D., Pueblo, Colo.

PATHOLOGY AND BACTERIOLOGY—Rutherford Gradwohl, M. D.

PARIS CORRESPONDENT — Thomas Linn, M. D., Paris, France.

NEW YORK CORRESPONDENT -- E. Franklin Smith, M. D.

LONDON CORRESPONDENT — R. T. Hewlettt, M. D., M. R. C. P., Chief Bacteriological Laboratory, Jenner Institute of Preventive Medicine, London.

TYPHOID FEVER.

BY FRANK PARSONS NORBURY, M. D.

Formerly Resident Physician Pennsylvania Institution for Feeble-Minded Children; Formerly Assistant Physician Illinois Central Hospital for the Insane; Physician to Oak Lawn Sanitorium and Passavant Memorial Hospital; Neurologist to Our Savior's Hospital; Lecturer Psycho-Physics, Illinois College.

AND EGBERT W. FELL, B. S..

JACKSONVILLE, ILL.

Typhoid Fever (*Month. Clyclop. of Pract. Med.*, February, 1900). Diagnosis.—The Widal reaction is usually a satisfactory test. Kosel and Mann think that as the reaction is one of immunity it is not applicable in early cases. Due attention being given to the severity of the case, the stronger the reaction the more favorable the prognosis. The reaction is more feeble in children than older persons. Biggs says that although the reaction should not have much weight, its presence is nearly conclusive proof of typhoid. Carlo Bareggi gives the following simple test: A few drops of blood are allowed to coagulate in a test tube; in typhoid fever very little serum is found, and the clot is not retracted. Rostoski says that in every case of nephritis, which might be classed as idiopathic but which has a high temperature, the Widal test should be tried. William Osler calls attention to the fact that the diagnosis cannot be based on any two or three symptoms. If the advantages of modern methods of diagnosis can not be had in every case in which the fever persists for six or seven days typhoid should be suspected. Moizard gives the following signs as practically differential from appendicitis; the abdominal resistance is less marked, the local hyperesthesia is less, and the constitutional disturbance

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is less marked. A. Jacobi calls attention to the difficulty of diagnosis in the young from a catarrhal fever, influenza, or glandular fever. The diagnosis can sometimes be arrived at by exclusion. The Diazo or Widal tests are nearly conclusive.

Etiology.—Park says that the bacilli are found chiefly in the urine and feces of the patient. They cannot usually exist in water for more than fourteen days. They may persist in the urine for months. It may be disinfected by the administration of urotropin.

Prognosis.—According to Taylor there is a mortality of 16,666 each year in the United States from typhoid perforation. This is essentially a surgical condition, and if such means were used in every case with as good results as have been obtained in the past, one-fourth of these could be saved.

Diet.—Bushyer and Shattuck give soft solid food in rather liberal quantities with a mortality of 8 to 12 per cent; the general course of the fever is improved and convalescence is quicker. Marsden gives a less restricted diet than is usual, and claims for it a more rapid recovery, lessened tendency to asthenic complications, and lessened liability of the patient overeating when food is allowed. Moorehouse and Morris Manges have also reported good results from a liberal diet. Speidel advises primary evacuation of the gastro-intestinal tract and total abstinence from food for five or six days. Water is given at regular intervals, and a daily rectal injection of half a gallon of saline solution is also given. After this a varied milk diet is allowed.

Treatment.—Copper arsenite $\frac{1}{100}$ gr. with 1 minim of nuclein solution is recommended by Aulde. Wilcox claims that with chlorine complete disinfection of the alimentary tract may be obtained. The tongue becomes cleaner, the appetite and digestion better, the fever lower, and the general strength and nervous condition improves under its use, and the duration of the disease is shortened. Hubbard gives calomel, ½ grain; guaiacol carb., 2 grains; podophyllin, $\frac{1}{20}$ grain, every two or three hours for one or two days, then substitutes menthol for the calomel, and continue it throughout the course of the disease. Jalap and calomel every third night is used by W. H. Thompson. Miller recommends a syrup containing ⅓ drop each of tincture of iodine and carbolic acid. Ballard recommends a full bath at 65° to 75° F. every three hours as long as the rectal temperature is over 102.2°. On entering the bath an ounce of spirits is given. The patient should be systematically rubbed while in the bath and well covered after removal, drying being delayed for fifteen minutes. In the German Hospital in Philadelphia the Brand method is depended on entirely, no antipyretic drugs being given. Albuminuria is more common with this treatment, but it is a transient condition.

Methods of Hospital Treatment of Typhoid Fever (Johnson, *Med. Age*, March 10, 1900).—Treatment may be classed under three heads: Expectant; intestinal antisepsis; heat reduction. A combination of these is used as a rule, neither alone being adequate. In the expectant treatment attention is directed entirely to the preservation of strength by care-

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ful feeding, tonics, etc. The mortality rate differs widely in different statistics, probably owing to difference in the severity of the epidemic and quality of nursing, the average being about 20 per cent. The antiseptic method aims at the destruction of the bacteria without harmful effects to the patient. This can be only imperfectly accomplished, but it may be serviceable in checking saprophytic growth in the intestine. Statistics vary widely as to mortality, the average being about 13 per cent. Better effects are not usually obtained by the Woodbridge treatment, although its promoter claims to have obtained excellent results. The objects sought in employing hydrotherapy are: Reduction of temperature; stimulation of nervous system, respiration and circulation; increase in exchange of gases and consequent oxidation of harmful products of tissue destruction. From this treatment combined with the administration of alcohol, calomel and antiseptics, as required, the best results are obtained. Alcohol should be given in delirium, when the tongue is brown and dry, when the heart is feeble, or pulse irregular or intermittent. Milk is the chief article in diet, and is supplemented by meat broths and juices, gruels and soft eggs. A soft, solid diet has been tried with good results, the advantages claimed being, better nutrition, better preservation of physical and nervous forces, and no increase in fatalities or complications.

Pathology and Treatment of Typhoid Fever (Dock, *Phys. and Surg.*, March, 1900).—The paper may be summarized as follows: 1. The results of bacterial cultures nor the Widal test are at present sufficient to prove the specificity of the disease. 2. The stools contain the germs in only 50 per cent of cases. The lymphoid glands of the lower illium are first infected, then the mesenteric glands, then the spleen and the various other organs. The kidney is infected in one-fourth of cases. Just how often the blood is infected is unknown. 3. Intestinal antiseptics can be of use only in removing saphrophytic growths from the intestine, and this can be better accomplished by the use of purgatives, as calomel. Enemata are better during course of disease. 4. The rise of temperature is not the cause of the other symptoms, but is merely one of the results of the infection. 5. The bath treatment is of value, not only in combating the temperature, but counteracts the poison of the disease, stimulates the heart and circulation, leading to better nutrition, increased secretion and excretion, especially of the kidneys, stimulates the nervous system, increases desire for food and improves sleep. 6. Moderate amounts of food may be given with benefit. The patient should be started on milk, and egg albumin, mutton or chicken broth, junket, ice-cream and custard added, the condition of the stools regulating the amount. 7. We have not at present and are not likely to have serum treatment of value.

Antityphoid Inoculation (editorial in *Med. Record*, August 11, 1900).—Although typhoid fever is classed as a preventable disease, it is a difficult matter to prevent it under the conditions of war, and much more difficult to check it when once started. Even in countries where sanitation is carried out more or less perfectly no sure method has been found, and in China where hygienic matters are at a notoriously low ebb, this question

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assumes grave importance. The results of the inoculation against typhoid fever to which the British soldiers in South Africa were subjected are being watched with much interest. Although it has been tried in India, and Haffkine declares it has been successful in reducing the mortality, the statistics at hand are not sufficiently convincing, and the treatment may be said to now be on its trial. Opinions of medical men serving in South Africa differ. Sir William MacCormac says it seems to lessen the liability to the disease, and those that do have it, have it in a milder form. Dr. Conan Doyle says, that although it is not an absolute preventive, it certainly modifies the course of the disease very materially. Others are not so enthusiastic, but certain it is that if the inoculation possesses protective properties, however modified, a most valuable discovery has surely been made.

Conclusions Reached by the Study of Typhoid Fever Among the American Soldiers in 1898 (Vaughan, *Indiana Med. Jour.* August, 1900).—Every regiment developed typhoid fever, and 90 per cent of them within eight weeks after going into camp. It assumed an epidemic form in large and small camps in the North as well as in the South. The doctrine of a specific origin was confirmed. Typhoid fever is disseminated by the transference of the excretions of an infected individual to the alimentary canal of others, and the reason for the great number of cases appearing in camps is the difficulty of disposing of the excretions. Water was not an important factor in the spread of the disease, flies and contact with infected persons being the principal means of dissemination. The space allotted to the regiments was often inadequate, and they were allowed to remain on one site too long. With change of location there should be disinfection of all clothing, bedding, tenting, etc. Beds should be raised from the ground; outer clothing should be removed at night. Where water carriage cannot be secured, all fecal matter should be disinfected and carted away. About one-fifth of the soldiers in the national encampments developed typhoid fever, the death-rate being about 75 per cent. Previous gastro-intestinal disorders seem to have no influence.

Surgical Interference in Perforation of Typhoid Fever (editorial in *Med. News,* August 11, 1900).—Up to a few years ago there has been but few operations for perforation in typhoid fever. Recently Keen (*Jour. Am. Med. Assoc.*, January 20, 1900) has reported a series of 158 cases, and and Shattuck, Warren and Cobb (*Boston Med. and Surg. Jour.*, June 28, 1900) have reported 24 cases. Of these 18 had a positive Widal reaction, in 3 it was negative, and in 3 the test was not made; all cases presented symptoms of perforation. In 3 cases nothing was found that would account for the symptoms. In one case no cause for the peritonitis present could be found; in two cases the peritonitis originated over the bases of the ulcers; in another in a ruptured mesenteric gland. Thus in only 17 of the 24 cases was peritoneal infection caused by a perforation. Eighteen of the cases were mild typhoid, and in 15 of these perforation or general peritonitis was present. A sudden acute exacerbation in mild cases often indicates perforation, while in a severe case it is usually due to a general septic peritonitis which has developed gradually. Sudden and severe pain more

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or less localized in the right inguinal region, and accompanied by tenderness, was the chief symptom where perforation was demonstrated. Where the onset was more or less gradual the distinct, severe diagnostic symptoms were preceded by distinct warning symptoms. In all cases where abdominal pain was complained of peritonitis was present. The perforation was found in the ileum in every case, and varied in size from a pin-head to a large hole. A right lateral is preferable to a median incision. Diagnosis of perforation is difficult, but complaint of abdominal pain, especially if localized, and especially in mild cases, should be regarded as a serious danger signal. Leucocytosis is considered a diagnostic symptom, but complete records are not given in these cases. Nineteen per cent of the cases recovered. In Keen's series the per cent of recoveries was 23.41.

Intestinal Antiseptics in Typhoid Fever (Anders, *Inter. Med. Mag.*, April, 1900).—Intestinal antiseptics are not specifics. Treatment is not directed against the Eberth bacillus or its toxins, but against the growths causing decomposition in the digestive tract and meteorism. It is, therefore, subordinate to cold baths, correct feeding and good nursing, but has a favorable effect upon some of the intestinal features, particularly tympanitis, and diarrhea when present. As the gastric secretion is deficient the author advises the giving of hydrochloric acid when meteorism is a marked symptom. In robust patients the use of calomel during the first few days is to be encouraged. Saline laxatives in divided doses are powerful to cut short the intermittent form of fever sometimes seen late in the disease. The author is emphatically opposed to the use of laxatives, according to the Woodbridge treatment, and thinks they are of use only in removing decomposing food from the intestines, and that they have no effect on the specific bacillus. The antiseptic he uses most is salol in three-grain doses every three hours. In urgent cases two grains may be used. Where there is marked distension of the bowel white turpentine in doses of three to five grains every three or four hours is preferable. Where constipation persists throughout the disease enemata of soap-suds should be used. In case where the ulcerative process is confined largely to the colon, when there is marked tympanitis over the colon, and diarrhea, sometimes of a dysenteric character, intestinal irrigation judiciously carried out tends to remove decomposing material and resultant toxic products. The antiseptic solution used must be warmed, and be gently introduced at a low pressure. Either a one-half of one per cent solution of salicylic acid or a 1 to 6000 solution of mercuric chlorid may be used. Irrigations should be made made every four hours in bad cases, three times a day in ordinary cases.

Variety in the Diet of Typhoid Fever.—Smith (*Inter. Med. Mag.* April, 1900) is not a believer in the exclusive milk diet in typhoid fever, and says that all patients do not require the same proportions of albumen, fat and sugar. Not only the specific infection itself, but the absorption of poisonous food-products and septic infection from open ulcers causes rise of temperature, in turn interferes with glandular action, favors fermentation and the production of ptomaines. It is important, therefore, that the diet should be such as will not easily undergo such changes. It is well known

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that if not perfectly digested milk is liable to give rise to irritating and even poisonous products, it is also irritating to the ulcerated intestines, and gives rise to flatulency. In place of milk the author gives a variety of fluid and semi-fluid food, his aim being to give, not the maximum that the patient can take, but the minimum that will sustain him. This should be kept up till the fever reaches a point, about a degree above the normal, where it will go no lower on a strict diet, when the amount of food should be increased. From the following list an agreeable diet may be arranged, and by carefully watching any article may be excluded which causes trouble: Milk, broths, soft-boiled eggs, junket, custard, soft part of raw oysters, milk toast, scraped chicken, scraped beef, chicken and rice boiled to a jelly, sago, tapioca, corn-starch, animal jellies.

Treatment of Typhoid Fever (Billings, *Inter. Med. Mag.*, April, 1900).—More satisfactory results are obtained from the hygienic than from the drug treatment. The patient's surroundings should be kept clean, the room well ventilated, bed-clothing disinfected, urine and feces disinfected with a 1 to 1000 solution of bichloride. The diet should be of milk, modified, by dilution with lime water, Vichy, etc., by peptonizing, by boiling, or may be in the form of buttermilk, kumiss or matzoon. In case the patient cannot take milk, well cooked gruels may be used. Although in many cases semi-solid, or even solid food may be given with advantage, in those in which the intoxication is profound milk is the ideal diet. In each case the diet must be arranged to suit the patient. Drugs will not lessen the duration of the disease, and should be given only when especially indicated. Calomel at the beginning is useful. Fever is best treated by application of water. The Brand method is preferable, but when this cannot be carried out one may use modified hydrotherapy. Baths increase the elimination of toxins, while the coal-tar products decrease it. When necessary an enema of plain water or soap-suds may be given for constipation. Opium or bismuth may be given for diarrhea; chloral and soda bromide for delirium. Morphia may be given in case of hemorrhage from the bowels, or one pint of a two-tenth of one per cent solution of calcium chloride given by the rectum. In case of perforation give morphine hypodermically and turn the case over to the surgeon.

Treatment of Typhoid Fever.—Professor H. C. Wood says (*Inter. Med. Mag.*, April, 1900) that if the following directions are carried out the mortality from typhoid fever should not exceed three per cent. Absolute rest in bed from the earliest symptom; abstinence from the use of medicine, unless distinctly called for, and then used properly and in sufficient dose; the rigid use of baths when the temperature gets to 102½ or over; the administration of turpentine commencing about the end of the second week; careful feeding, give enough but not too much food, semi-solid meat foods in some cases being preferable to milk.

Post-nasal adenoids in children are blamed for the causation of quite a number of general diseases.

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Favorite Prescriptions

Acute Tonsillitis.—

℞ Tinct. aconiti..... m. 8
Liq. ammon. citratis..... dr. 2
Syrupi auranti..... dr. 1½
Aquæ dest. q. s. ad..... oz. 2

M. Sig.: Two teaspoonsfuls every three hours for a child five years old.—Ashby, *Medical News.*

℞ Sodii salicylatis..... dr. 4
Syrupi acaciæ..... dr. 4
Aquæ cinnamomi..... oz. 4

M. Sig. A dessertspoonful every two or three hours.—*Columbus Med. Jour.*

Facial Neuralgia.—In neuralgias about the face or head, three minim doses of the tincture of gelsemium every half hour will often act almost miraculously, and leave no ill effects.

Pills for Chronic Headache.—Zentler recommends the following prescription:

℞ Arsenate of sodium.....
Sulphate of atropine.....aa gr. $\frac{45}{100}$
Extract of aconite..... gr. 7½
Powdered canella, q. s.....

Mix and make thirty pills. From one to four pils daily. The dose should be diminished if it causes dryness of the throat, mydriasis, or heat and tingling.—*New York Medical Journal.*

Palatable Epsom Salts.—According to the *Medical Record*, the following combination is not unpleasant:

℞ Magnes. sulphat..... ℥ss
Ac. sulph. dil..... mii
Syr. limonis..... ℥iss
Aqua, q. s. ad..... ℥ii

M. S. Take at dose.

For Cystitis, where there is a sanguineous discharge:

℞ Potass. bromid..... ℥ iv
Tr. gelsemium..... ℥ ij
Fld. ext. ergot..... ℥ ss
Spts. nitric æther.....q. s. ad ℥ iv

Mix and make into solution. Sig.—Teaspoonful three or four times daily, in water.—Griffin, *Summary.*

Pernicious Anemia.—A prescription of Dr. J. N. Danforth's is:

℞ Fowler's solution..... ℥ iss
Acid phospate..... ℥ iij
Bone-marrow extract..... ad. ℥ viij

M. Sig.—Dessertspoonful after each meal.—*Medical Record.*

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PARVULES.

Fluid extract of conium in half drachm doses is claimed to have given good results in threatened abortion.

The insomnia of heart disease is benefited by digitalis, strophanthus, strychnine and other cardiac tonics.

Hypodermic injection of a solution of camphor in ether is considered a rapid and powerful heart stimulant.

The value of oil of eucalyptus as a gastro-intestinal and genito-urinary antiseptic should not be overlooked.

Suppositories of ichthyol, 5 to 10 grains, are recommended in prostatitis. They are used morning and night.

Dr. Hare thinks that the best mixture of iron for the blood, especially in chronic nephritis, is the old Basham's mixture.

Bryonia affects the muscles and, but more especially, the tendons. In rheumatism and pleuritis it may be depended on.

Dr. Phelps says that alcohol is an absolutely safe and sure specific against the escharotic action of pure carbolic acid.

For abscesses, take boric acid and acetanilid, equal parts, and glycerin to make thick paste; spread on a soft cloth and apply.

Belladonna is indicated in dullness, delirium, vertigo, headache, distention of the veins, epilepsy and typhoid fever, etc.

Dr. Hare, in speaking of kidney diseases, says that patients with renal troubles ought not to be sent to localities which are largely visited by phthisis patients, as Colorado.

It is said that the negro enjoys a singular immunity from catarrhal inflammation, but is prone to tuberculosis and syphilis.

Dr. Blever asserts that violet rays of light applied to the human system by means of electricity are an absolute cure for consumption.

Potassium chlorate one grain, and tincture of iron, ten minims, every two hours, acts splendidly in the treatment of ptyalism.

A dose of castor oil, although not sufficiently large to produce a movement of the bowels, will frequently allay the colicky pains in infants.

A reliable sign in pulmonary tuberculosis is increased whispering resonance long before it may otherwise be determined by the stethoscope or percussion.

It is stated that in eczema of the scalp in young children, berberis aquifolium acts nearly as a specific. The application of bismuth and lanolin externally will assist materially.

The action of ustilago on the uterus is powerful, but different from that of ergot. It cause regular intermittent contraction. The contractions produced by ergot are tonic.

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MEDICAL MISCELLANY

The Treatment of Recurrent Attacks of Spasmodic Croup (Creel, *N. Y. Med. Times*).—A quickly acting emetic, terpeth mineral, alum and honey or ipecac will overcome the paroxysm. A warm bath will aid the action of the emetic and is followed by sleep. The tendency to recurrence of attacks is due to existent bronchitis, and relief of this will relieve the croup. Treatment varies with the case in hand. The author obtained good results from small doses of balsam of copaiba and the use of a vapo-cresolene lamp. Warm clothing should be worn, the chest and feet being well protected.

How to Read the Tongue.—The perfectly healthy tongue is clean, moist, lies loosely in the mouth, is round at the edge, and has no prominent papillæ. The tongue may be furred from local causes or from sympathy with the stomach, intestines or liver. The dry tongue occurs most frequently in fever, and indicates nervous prostration or depression. A white tongue is diagnostic simply of the feverish condition, with perhaps a sour stomach. When it is moist and yellowish brown it shows disordered digestion. Dry and brown indicate a low state of the system, possibly typhoid. When the tongue is dry and red and smooth, look out for inflammation, gastric or intestinal. When the papillæ on the end of the tongue are raised and very red, we call it a strawberry tongue, and that means scarlet fever. Sharp, pointed, red tongue will hint of brain irritation or inflammation, and a yellow coating indicates liver derangement. When so much can be gained from an examination of the tongue, how important it is that the youngest child should be taught to put it out so that it can be visible to the uttermost point in the throat.—*Health.*

The Relation of Varicella to Variola (Thomas, *Med. Dial*, April, 1900).—Varicella and variola are distinct diseases. Varicella has a slightly longer period of incubation than variola; it occurs in adults very rarely, and may cause high fever, delirium, convulsions, backache, headache, malaise, etc. In children the eruption is the first symptom. The papules are not shotty; the vesicles are full and globular, containing serum but no pus, unless secondary infection takes place. The fever rarely begins before the eruption, and there is no remission on its appearance, or secondary rise as in variola. The vesicles appear in crops of from a dozen to a hundred, first on the scalp, neck, back and chest. It is slight on the face, and infrequent on the limbs. The mucous membranes are involved. They do not form pustules, are not umbilicated, and may either dessicate or rupture, but do not form scars. Conditions and complications making the differential diagnosis difficult are: Mild small-pox infection may present papules which are not shotty, and vesicles, if present, may not develop into pustules. The vesicles in varicella may be confluent, and may become papular as a result of secondary infection. Varicella may complicate small-pox, pemiphigus, measles or scarlet fever, making recognition difficult. Varicella gangrenosa is usually a sequel, but may appear before the disappearance of the vesicles. Hemorrhagic varicella may give entrance

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to secondary infection resulting in suppuration. The differential diagnosis is the same as given in Macdonald's paper. Nootnagle, in the same issue of the *Medical Dial*, gives as prophylaxis isolation, complete disinfection of clothing and premises, and vaccination. Treatment is as for other acute fevers. Pitting is best prevented by continuous application of wet sublimate dressings.

Prolapsus Ani, Internal Hemorrhoids, Ulcers—Whitehead's Operation (by T. J. Biggs, M.D., Stamford, Conn.).—John M., Stamford, Conn.; Jew; age 29; diagnosis, prolapsus ani, internal hemorrhoid and ulcers of rectum; admitted July 12th, 1899. Had been a sufferer from this condition for eight years. During that time he had been under treatment at various institutions and by a number of physicians. Twice during that period he had been operated on, but the wound had not properly healed at either time, and the condition instead of being benefited was worse. He suffered extremely in passing feces, and from tenesmus after discharge; so extensive was the diseased condition that I determined to do Whitehead's operation. After preparing the patient, on July 14th I performed the operation. Incision was made entirely surrounding the sphincter. The mucous membrane was dissected from the muscular coat and brought down below the margin of the anus, and the membrane above the hemorrhoidal and ulcerous section was divided transversely and kangaroo sutures were applied to the free margin of the skin below; parts were irrigated with Thiersch-bovinine solution, and dressed with iodoform-bovinine gauze. As to food, the patient was allowed absolutely nothing but bovinine, a wineglassful every two hours in milk. The bovinine dressings were changed once every three hours. For two hours after the operation the patient suffered considerable pain, but the constant application of the bovinine dressing finally subdued it, and after that he suffered little or no pain. Except where the bovinine dressings are used, I have found the patient to be an extreme sufferer after this operation for at least twenty-four hours. The bovinine seems to exercise a specific influence in reducing pain. July 17th, the patient was given a saline cathartic, which was followed two hours later by a large evacuation. The bovinine dressings were continued three time in twenty-four hours, July 23d, the wound had almost entirely healed and the stitches had all come away. July 26th, the patient was discharged cured, leaving a soft non-sensitive pink cicatrix. The rapid healing obtained by me in all my rectal surgery when I have employed bovinine, leads me to urge strongly on my professional brethren to adopt it, the healing not only being rapid, but complete: a result so seldom obtained in these parts, where infection is almost constant.

The Battle Fracture Charts.—Battle & Company of this city have prepared a series of twelve charts illustrating fractures of the long bones, which they are sending to the profession in connection with their instructive clinical literature; one chart will accompany each pamphlet until the series is complete. These charts, or, more exactly, anatomical drawings, are handsomely gotten up in colors, they are anatomically accurate, and the text accompanying them is up to date and of a nature to be of use. See that your name is on the Battle address list and that you get the complete series, it is valuable.

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American Medical Association

NEXT ANNUAL MEETING AT COLUMBUS, OHIO, JUNE 6-9, 1899

SECTION ON OBSTETRICS AND DISEASES OF WOMEN

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EXECUTIVE COMMITTEE

A. TABOR JOHNSON, Washington, D.C.
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JOSEPH PRICE, Philadelphia

OFFICE OF THE CHAIRMAN

April 19th 1899.

It gives me much pleasure to say to my professional friends, who are not acquainted with the merits of Cortexalin that I have used it as a tonic in convalescing cases and as an appetizer and have found it entirely satisfactory. The preparation is being introduced through the medical profession in a legitimate and ethical manner.

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DOSE: From one teaspoonful to one wineglassful three times a day, according to age, preferably one-half hour before meals.

Owing to the cost of our preparation due to the superior quality of imported Burgundy employed in its preparation, we cannot follow the custom of distributing free samples.

To interest physicians who have not used CORTEXALIN, a Peerless Tonic Wine, we will upon receipt of currency or money order for six dollars ($6.00), send ONE CASE, containing one dozen 16-ounce bottles (our regular size package), charges prepaid. This offer is for CASE ONLY.

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PRACTICAL THERAPEUTICS.

A VISIT TO AN UP-TO-DATE LABORATORY.—A courtesy which was extended to the members of the American Medical Association on their way home from Atlantic City was an invitation to visit the Bacteriological Laboratory of Messrs. Reed & Carnrick at Jersey City, N. J. The physicians who availed themselves of the invitation were received by Dr. Warner, and he and his assistants took the keen delight of laborious scientists in showing and explaining the many actualities and possibilities of their constant work and research. The several rooms comprising the laboratory are tiled in white, and resemble nothing so much as an aseptic operating room. Instantly the cost and perfection of all the paraphernalia and furnishings used appeal to the eye of the visitor; the rows of microscopes, under which were seen slide after slide, showing bacilli enough to account for even the sufferings of Job himself; then a sterlizer, where diphtheria germs encased in tubes were enjoying a prevailing hot wave. A unique exhibit was a public school book, a geography, which had played hookey, and had been punished by having its cover scraped, and some good, healthy-looking Klebs-Loeffler bacilli found upon it. The most modern microtomes were shown, so delicately adjusted that infinitesimally small sections could be immediately removed from a specimen, which, when stained and mounted under the cover-glass, were so thin that they resembled but a wash of water color. Then came a look at the animals, kept for experimental purposes, in their comfortable miniature apartment houses. Poor Bre'r Rabbit had Tuberculosis, and refused to get better; his neighbor in the fourth floor flat was bravely fighting the ravages of diphtheria, and away out in the suburbs a colony of exclusive guinea pigs ever debated the vexed question of which little pig should go to market. Piggie's answer was awaiting him in the form of a huge Jersey mosquito, safely housed in a tube, and very hungry; and so, after the attentions of his barber in giving him a good, close shave, the guinea pig would, through the bites of the mosquito, soon be, it was hoped, the victim of malaria. A visit to the well equipped dark room, and a view of some fine results in micro-photography, and in a small studio were some of the most effective sketches in water-color executed with the greatest skill by Dr. Warner, and replete with most minute detail, a privilege, indeed, to see these sketches. On arriving at Jersey City, should any of our Canadian physicians have the spare time, a few minutes ride on the Turnpike Trolley will afford an opportunity of spending a delightful hour at the laboratories.—W. A. Y.

ON THE PHARMACOPOEIAL RECOGNITION OF DIPHTHERIA ANTITOXIN—(Read by Joseph W. England at the last meeting of the American Pharmaceutical Association.)—The following is a brief abstract: The human body has within it natural

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resources for combatting disease producing toxins. In diphtheria where the bacteria multiply and eliminate the poison with such unthinkable rapidity these natural resources are often overcome. In order to assist the system in its struggle, antitoxin is used. This is a modified serum prepared outside the body by a process similar to that which takes place inside it The antitoxin is prepared by transplanting colonies of diphtheria bacilli into flasks of faintly alkaline bouillon and kept at 37 deg. C. After the toxin has been produced the bacilli are destroyed by trikresol and removed by filtering. This toxin is then injected into horses every 5 to 8 days in increasing doses for 9 to 12 weeks when as much as 300 c. c. ma ybe borne. The horse is then bled quite freely, the blood collected in sterile bottles, and the serum removed. This is preserved with trikresol and hermetically sealed in glass tubes. Standardization is expressed in immunizing units. An immunizing unit is ten times the quantity of serum necessary to save from death a 300-gram guinea pig which has received ten times the minimum fatal dose of toxin. The finished product contains a fixed number of units per c. c., ranging from 250 to 500.

This unit of strength has been generally adopted and if safeguarded by appropriate tests in the pharmacopoeia there is no reason why the proper standard of identity, purity and strength should not be maintained. As it is now there is no general agreement as to the number of units to the c. c., nor is there any guarantee that manufacturers hereafter will adhere to the present standard. In its instructions to the committee on revision, the Pharmacopoeial convention asked that assay processes, tests of identity and purity be added, but that physiological strength be not introduced by the committee. It seems, however, that this would not apply to antitoxin, as the physiological test is accurate and is the only accurate method of determining the quality of this valuable agent.

I wish to speak of "Maltine cum Creosote," having taken it myself for indigestion which attacked me some time ago and seemingly became persistent in spite of treatment.

I was somewhat "run down" as to general health, and I believe the attack was much due to this circumstance. Digestion was slow and imperfect, especially of the starches. The stomach seemed to be in an atonic condition.

Knowing creosote to be indicated in such atonic condition and remembering I had a sample of "Maltine cum Creosote," I decided to take it, which I did in small doses of a dram after meals. It began to do good work immediately and after taking the bottle I find myself almost cured.

I am, therefore, pleased to state I have found a new indication for a combination which I consider one of the most valuable of the Maltine preparations.—E. Lambert Yourex, M. D., Baltimore.

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URIC ACID DIATHESIS.—In the so called uric acid diathesis, in renal calculi composed of urates, and in irritable bladder from deposits of uric acid in the urine, cystogen in five grain doses taken four times a day, produces a perfectly clear, non-irritating urine, and relieves the symptoms of systemic poisoning from uric acid.

The McArthur Hypophosphite Company appeal entirely to the reason and educated sense of the physician in their admirable advertisement on back cover page. Their Syrup is a standard and reliable preparation. It is not a conglomerate mass of poly-pharmacy, as some others in the market, but embodies the valuable therapeutical properties of the Hypophosphites of Lime and Soda, without

THE PROPER TREATMENT OF HEADACHES.—J. Stewart Norwell, M. B., C. M., S. Sc., House Surgeon in Royal Infirmary, Edinburgh, Scotland, in an original article written especially for Medical Reprints, London, Eng., reports a number of cases of headache successfully treated, and terminates his article in the following language: "One could multiply similar cases, but these will suffice to illustrate the effects of 'Five-Grain Antikamnia Tablets' in the treatment of various headaches, and to warrant the following conclusions I have reached with regard to its use, viz.:

(a) They are a specific for almost every kind of headache.
(b) They act with wonderful rapidity.
(c) The dosage is convenient.
(d) The dangerous after-effects so commonly attendant on the use of other coal-tar analgesics are entirely absent.
(e) They can therefore be safely put into the hands of patients for use without personal supervision.
(f) They can be very easily taken, being practically tasteless."

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"WHERE?"

After all that has been so well said by those in position to speak with authority in the matter, it is remarkable that physicians who write papers continue to be guilty of such serious lapses in English. Editorial experience agrees that the commonest of all errors made by medical as well as by lay writers in that of the improper use of "where," in place of "when" or "in which." A specialist in a distant city recently, to take one instance out of many, constructed the following remarkable phrase: "The case where the wound is through the corneal region—where the body is removed or cannot be found, etc." It seems passing strange that so many men do not know that "where" refers only to place. This writer did not mean to discuss "where" his case was, and certainly he had no idea of telling his readers of the region "where" the body is removed, so that by misuse of this little word he rendered his whole sentence so ambiguous as to destroy its usefulness, for the ordinary reader never stops to reconstruct sentences. If the meaning is not clear upon first reading, it is a rule that the reader lays aside the paper as too tiresome to waste further time upon. What our writer really intended to say was this: "The case in which the wound is through the corneal region, when the body is removed or cannot be found, etc." How different the sentence now reads and how readily the author's meaning is now determined!—Cleveland Medical Journal.

RECOVERY FROM LA GRIPPE.—One of the most unpleasant features of La Grippe is the prolonged period of convalescence, sometimes extending over several months, during which the patient struggles to regain his former vigor. This struggle may be greatly shortened by paying especial attention to promoting the vitality of the tissues and improving the quality of the blood. During La Grippe epidemics most cases have been especially characterized by disturbance of the gastro-intestinal tract and after the patient has recovered from the dangerous effects of the disease he is often left in a severe dyspeptic condition. In such cases physicians find Allouez Magnesia water of great value as its curative action on the digestive organs is very prompt and causes no disturbance or reaction. It is highly agreeable to the palate and possesses the rare ability to "stay down" even when the lightest nourishment taken provokes the sensitive stomach.

TRAIN SERVICE VIA THE WABASH.—This popular line is ever on the alert to afford its St. Louis patrons the very best time to all points. In addition to its famous "Continental" limited, which is the fastest train to Boston, the Wabash has just inaugurated another fast line to the East, which particularly appeals to physicians and business men. This train leaves St. Louis for New York at 11:30 and the sleeper is placed in the Union Station at 9:30 p. m. You can therefore spend your evening at home or with friends just as you would if not going away; or at any time after 9:30 you can have access to your berth and retire. The arriving time at New York is also arranged most conveniently for business men. You arrive at the beginning of your business day 7:30 a. m.—plenty of time to reach your hotel and breakfast before business hours—or if you have leisure you may occupy your berth until 9:00 or 9:30 o'clock, as the sleeper is left standing in the station to afford this convenience.

Another improvement of interest is the addition of an entire train each way between St. Louis and Chicago, leaving both cities at 11:30 p. m., with compartment and open section sleepers, arriving Chicago 8:00 a. m., and southbound at St. Louis 7:56 a. m.

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A grand medal has been awarded by the Paris Exhibition to the United States exhibit of journals and periodicals. Among the medicals included in this group are the St. Louis Medical and Surgical Journal, Journal of the American Medical Association, Medical Fortnightly, Philadelphia Medical Journal, American Medical Journalist and the Medical Herald.

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The Medical Fortnightly.

Issued Tenth and Twenty-fifth of Every Month by the Fortnightly Press Co.

UNDER THE EDITORIAL DIRECTION OF

FRANK PARSONS NORBURY, M. D. AND THOS. A. HOPKINS, M. D.

Secretary: CHARLES WOOD FASSETT, M. D.

A COSMOPOLITAN BIWEEKLY FOR THE GENERAL PRACTITIONER

Editorial Offices in St. Louis, Chicago, Cincinnati, Jacksonville, St. Joseph, Kansas City, and Pueblo, where specimen copies may be obtained and subscriptions will be taken.

Address all business communications to the Fortnightly Press Company.

Address all contributions and books for review to the Editors, Suite 312, Century Building, Saint Louis.

Paris: U. S. Press Building, Espanade des Invalides, Paris Exposition.

Volume XVIII OCTOBER TWENTY-FIFTH Number 8

Editorial Department.

Fake Clinical Reports.

ONE of the most prolific medical writers, so-called, of the age resides in St. Louis, and during the past two years it has frequently been our privilege to decline to publish matter from his pen. During this period he has written a most marvelous assortment of articles, any one and all of which are enough to disgust the intelligent reader, for they are "fearfully and wonderfully made." How they get past the editor of a respectable journal is a mystery. We are making a collection of these papers, which for convenience we are calling the "Hooker Library," and we shall use it as a clincher where manufacturers do not understand why our pages are not open to him. We were anticipated in speaking on this subject by the editor of the *Regular Medical Visitor*, and we can devoutly say amen to every word of his statement of the case; but we would go a step farther; there are others scattered over the country, who will, for a small consideration, favorably report on any preparation, the primary requisite is *the consideration*, whether the product have real merit or not cuts very little figure, as in all probability the material sent for the test never reaches a patient. A most contemptible thing is a man who falsifies in a clinical report, he is a disgrace to the profession to which he unfortunately belongs, but worse by far is he who deliberately makes his whole report from imagination; he perpetrates a wrong on the manufacturer, on the profession and on the public. Experience has proven to us that the manufacturer is almost invariably sincere in his desire for an impartial and thorough test, he expects his product to stand or fall on its merits; he neither purposes nor desires perjured reports, and when he gets them he is buncoed for more than the money he may have paid for a thorough clinical test. It is the province of the medical editor to protect the victims of these fakirs; a little investigation has shown us that the names of the men who are doing this sort of work are well known to the average editor. By uniformly closing our pages to them we may experience some temporary inconvenience (and perhaps fail to secure a few advertising contracts), but the ultimate result will be happy for all those most vitally concerned.

T. A. H.

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The Mississippi Valley Medical Association.

THE Asheville meeting of the Mississippi Valley Medical Association has passed into the history of this organization as the most complete social success ever recorded. Our Southern friends have eclipsed all previous efforts, and to them we give their merited honors.

Hospitality seems to be in the air of the beautiful city of Asheville in the "Land of the Sky," for everybody, even the street urchins, held themselves in readiness to serve the medical guests, and thus help to make memorable this lovely spot, so near to Nature's heart. The organization of the Asheville profession as Committee on Entertainment and Reception was perfect, and nothing was left undone to make pleasant and profitable the sojourn of the visiting members. The Ladies' Reception Committee, made up of the wives of Asheville physicians, gave striking evidences of the genuineness of the true Southern hospitality, acting together as one hostess they opened their homes for the reception of the visiting ladies, and by many other kind courtesies extended the fellowship of the community to their guests.

A. H. CORDIER, M. D.,
KANSAS CITY.
President-elect Mississippi Valley Medical Ass'n.

The notable entertainments were a drive over the Biltmore estate, owned by Vanderbilt; a railroad trip over the Southern Railroad to Round Knob, one of the highest points in the Blue Ridge; receptions at the home of Dr. Burroughs and at Winyah Sanitarium; smokers given by the Buncombe County Medical Society and one by Dr. C. L. Minor. The visiting ladies were delightfully entertained with receptions, luncheons, drives, etc.

The sessions, presided over by the affable President, Dr. Harold N. Moyer, and held in the ball-room of the Battery Park Hotel, were well attended, and indicated that in spite of the social pleasures, which were many, the scientific interests of the meeting were not ignored or neglected.

The scientific programme as prepared by the efficient Secretary, Dr. Henry E. Tuley, was excellent, and while many failed to respond when their papers were called, yet the time given to papers and discussions was fully taken up. The surgeons, as usual, had thorough discussions, and many valuable suggestions and points were brought out and made serviceable. The medical papers included the discussion of tuberculosis, asthma and inebriety, and advances made in therapeutics, etc.

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The exhibit was good and showed enterprise in every way on the part of the exhibitors. The space was all occupied, and every exhibitor seemed satisfied with the attention given his display.

The meeting as a whole was a magnificent success and worthy of the New South and the mighty Mississippi Valley.

The officers elected are as follows:

President—A. H. Cordier, of Kansas City.

First Vice-President—C. F. McGahan, of Aiken, S. C., and Bethlehem, Mass.

Second Vice-President—C. L. Minor, of Asheville.

Secretary—Henry E. Tuley, of Louisville.

Treasurer—Dudley S. Reynolds, of Louisville.

Chairman of the Committee of Arrangements—J. C. Culbertson, of Cincinnati.

The next meeting will be held at Put-in-Bay, Ohio, in 1901.

F. P. N.

An Inadvertent Testimonial.

WE have known melancholy Bill Russell since he was a boy. Hence, when he wrote us a letter and signed his name Laughing Bill Russell, we thought something had caused this transformation, and as we read his letter we became convinced that surely the day of miracles had come. We have presumed on our long acquaintance with Bill to publish this personal letter, which explains itself, and which certainly is of interest to the profession. Here it is:

CHICAGO, ILL., October 1, 1900.

DEAR DOCTOR NORBURY:

You will be surprised to hear from me, I know. But I cannot keep still, I am so joyous over my recovery from an illness that threatened my life. For ten years I have been an invalid suffering from that tired feeling which prohibits one from getting up to make the fire in the morning, or toting the baby at night. I had a pain in my chest, also my in dress suit case; a horrible, creepy feeling at times, as if an artificial ice machine and a graphophone were playing rag-time up my spinal column. I had a Royal Blue taste in my mouth and an Aguinaldo pain below the name-plate on my shirt. I had sixteen Rœntgen ray photographs taken of this region, trying to find the pain, but all to no effect. It was here today and there tomorrow. My complexion varied with the rise and fall of my gall-bladder. (You know I am a traveling salesman.) My hair has changed—frosted by going up against a live wire. I bought stock in a New Jersey chartered Trust in Milk of Human Kindness, found it all chalk, and poor quality at that. I have lost confidence in myself since I met a Kinlock Park confidence man. I had insomnia—could not sleep at night, because of the fear of death. I fell down an elevator shaft on a dark night, caused by stepping on a black cat owned by the negro janitor. His dark lantern had gone out and would not be back until next day, hence my awful fate. I had no appetite, lived on angel food, no butter, no mint julip, no ox-tail soup or Spanish mackerel—nothing but angel food.

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I was in a horrible state, when one day I met a friend, a former light-house keeper from the dome of our family hotel, who had trouble with his lights and kidneys. He said he was given up, and the sculptor had been ordered to take his death mask, when he was induced to try the Roberts-Hawley Lymph Cure. The effects were marvelous, in his case he no longer had to wear glasses; a new seat appeared in his pants; his artificial teeth changed to a natural color; he could talk French, something he had never been able to do before in his life, and in short, he was a new man.

By reason of this marvelous change in my friend, I went up to Chicago to see these people. I registered at the Great Northern, and asked to be directed to the great sanitarium where people were being cured of ailments. They said take the car to 12th and Wabash avenue. Now, what do you suppose is there—*nothing but his job lots, Dowie* and ZION. I came back filled with righteous indignation, pain and a little mountain dew so as to screw up my courage, and then I with a loud voice tackled the breastworks of the clerk for misdirecting me. Like a true Chicagoan, he said, "I will try again in the short alley—if you will get next to me, ye liver-colored son of Missouri." So I tried, and he said, Oh, you want to see Joe Hawley (he said Joe with a familiarity, just as easy as if Joe was a police officer on Cabanne). He directed me to Joe's office. I recognized Joe's office, just as you do the fish stalls in Fulton market, by the odor. It had kind of a billy-goat-down-'neath-the-ground-wine-cellar-and-cobwebs-combined odor. Joe was glad to see me, and at once commenced to tell me of the 4768 cases just like mine on record in his office, 4782 of whom had been cured after some very *high* authorities (13 to 27th stories of the Columbus Memorial, Reliance and Venetian Buildings) had given them up. He even showed statistics from Bulletin No. 66864 (one issued every half hour, as returns come in from all over the world) that my disease was being cured even before it came into existence, and said that all children born of parents treated by them would be immune, so would their children and their children's children even unto the end of time. Amen. I asked what was my disease. He remarked, oh, I never thought to examine you, pardon me; we are so accustomed to shooting the harpoon into all alike, that such a trivial thing as a diagnosis is apt to slip my mind. But I was diagnosed, my measure was taken for a billy-goat extract, and I was asked to step into the back-room, where as the band played "Hot Time in the Old Town Tonight," I was harpooned on the starboard just aft of my liver. I was then kneaded like you handle hard-tack dough—but at once, like Longfellow's Ship of State, I commenced to feel new life along my keel. Holy smoke, but I was a ringer, I made a quarter in less than 26, reached the half in 54, and was on the home-stretch 1.20 and scored in 1.40, breaking all previous records for a two-year-old billy-goat.

How is that; but as to my health, well, I never saw anything like it; why I have an appetite that craves "de paper on de bill boards," I eat tomato cans with a relish, and even tackled the garden hose for dessert. I never could eat butter before, now it is my pastime. I would make an Alpine guide look silly by my ability to scale a house-top. You should see

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me, why I have a smile "just like Teddy," only I have whiskers on it; my voice has a peculiar clarionet tone, tremolo pianissimo soft pedal, but (that word *but* comes so easy) I am well. Yes I am a regular 1400 barrel well. Full, overflowing, and shouting the praises of Roberts-Hawley. I am to be photographed this afternoon for my "after taking" picture. Say, but I look like Croker, feel like a small boy with a new pop-gun, and am coming home next month to vote for McKinley, Bryan and Debs.

Good bye, bye, bye. (*Stacatto.*)

LAUGHING BILL RUSSELLER.

A MALIGNANT TYPE OF MALARIAL FEVER has been for some time prevalent in Venezuela; the death rate in the Oronoco and Amazon regions is alarmingly high.

THE TRI-STATE MEDICAL SOCIETY OF ALABAMA, GEORGIA AND TENNESSEE met at Chattanooga, October 11, 12 and 13, immediately at the close of the Mississippi Valley Medical Association meeting, and many members visited this society. The new officers are as follows: President, Dr. M. C. McGannon, Nashville; First Vice-President, Dr. W. G. Bogart, Chattanooga; Second Vice-President, Dr. Seale Harris, Union Springs, Ala.; Third Vice-President, Michael Hoke, Atlanta; Secretary, Dr. Frank Trester Smith, Chattanooga; Treasurer, Dr. Geo. R. West, Chattanooga.

An Evidence of Prosperity.—The following representative houses have renewed their contracts for space in the FORTNIGHTLY for 1901, thus expressing their endorsement of the FORTNIGHTLY'S expansion policy:

Crittenton, C. N., Co., New York City
Lambert Pharmacal Co., St. Louis
Mariani & Co., New York City
Globe Mfg. Co., Battle Creek, Mich.
Henry Pharmacal Co., Louisville
Purdue Frederick Co., New York City
Jas. I. Fellows, New York City
Cystogen Chemical Co., St. Louis.
Tilden Co., St. Louis and New Lebanon, N. Y.
McArthur Hypophosphite Co., Ansonia, Conn.

Among the new advertisements to be found in this issue, please note:

Cortexalin tonic, Cortexalin Co., New York.
Ergo-Apiol and Glyco-Heroin, Martin H. Smith Co., New York.
Linonine—"Perfect substitute for Cod Liver Oil"— and Saline Solvent, Danbury Pharmacal Co., Danbury, Conn.
Antitoxins and Vaccines, H. K. Mulford Co., Philadelphia.
Glyco-Thymoline, Kress & Owen, New York City.
Lactopeptine tablets, N. Y. Pharmacal Ass'n, Yonkers, N. Y.
Saola, germicide, Tilden Co., St. Louis and New Lebanon, N. Y.
Bayer Products, Farbenfabriken of Elberfeld Co., New York.
Northwestern University Medical School, Chicago.

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Notes of the Asheville Meeting M. V. M. A.

Sixty-four new members is the record for the Asheville meeting.

Never in the history of the M. V. M. A. were there so many ladies in attendance.

The new Winyah sanitarium opened its hospitable doors to visiting physicians; an evening reception was one of the pleasant features of the meeting.

This meeting is another evidence of the wiping out of sectional differences, the cultivation of brotherly love and the development of the United Nation spirit.

A novelty of this beautiful ride was the presence on the train of two genuine Moonshiners, with their "Mountain dew." These mountaineers have been under Uncle Sam's surveilance and know the ropes of the game.

The next meeting of the association will be held at Put-in-Bay, Ohio, near Toledo, in September next. "Mine host" T. W. McCreary of the Hotel Victory will care for the meeting in his magnificent hotel, said to be the largest summer hotel in the world.

Dr. H. M. Skillman of Lexington, Ky.. another veteran who is still young, although he is seventy-four years of age. In his youth he was an assistant to the noted Dudley, whose operations for stone attracted attention in "the forties" and who gave up practice in 1847.

Among the many Southern physicians present was Dr. T. B. Greenlee of Meadow Lawn, Ky, who at the age of 84 has the distinction of missing but three meetings of the American Medical Association in twenty-five years. He is also a faithful attendant upon the M. V. M. A.

Biltmore, the lordly estate of Mr. George Vanderbilt is perhaps the greatest private experimental station in horticulture, forestry, agriculture, etc., in the world. Here, is to be found real scientific work, all of which is destined to add to the practical value of getting the most out of the products of that region, as well as developing the science of forestry.

Dr. Chauncey D. Palmer of Cincinnati, who for thirty-seven years has been a distinguished member of the faculty of the Medical College of Ohio, was present throughout the meeting.

The Battery Park Hotel, one of the most famous in the United States, under the management of the genial E. P. McKissick, did itself great honor in caring for the guests and providing for the meeting places.

Dr. A. M. Phelps, of New York, the noted orthopedic surgeon, gave a most excellent paper on treatment of Tuberculosis of the Hip Joint, with practical demonstrations as to the use of full strength carbolic acid, neutralizing its escarotic effects with absolute alcohol. Dr. Phelps is Southern born but a resident of New York.

The Queen & Crescent Route from Cincinnati to the South, most complete in its equipment, with a road-bed unequaled for safety and cleanliness, with diversified scenery magnificent in its panoramic splendor, is the route par excellence to the South. Invalids en route have every care and comfort and patrons will "choose no other" after once taking this route.

Chattanooga and its surroundings has an attraction to every lover of the history of this nation, whether he be from the North or South, for here amid the scenes made historical in battle are impressed the wonders of the grit and dare, the integrity and achievement of the brave sons of American soil. These famous battle fields are best reached from the north by the Queen & Crescent and Southern routes.

The excursion over the Southern Railroad, given to "Old Fort" over Round Knob, passing the Royal Gorge, the famous Mud Cut with its wonderful engineering achievements and across the Blue Ridge was a memorable ride. No such scenery exists east of the Rockies as is to be found along this route. The Southern Railroad did all in its power to make the visiting physicians and their wives remember the scenic attractions of the New South.

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The Exhibit M. V. M. A.

The exhibit was in the basement of the "Battery Park," occupying a large room, beneath the "palm-room" and the "log-cabin room."

THE PHYSICIANS' STANDARD SUPPLY CO., successors to Globe Manufacturing Co., of Philadelphia, was represented by the president of the company, E. Stevens. Their exhibit consisted of nebulizers, vaporizers, inhalers, air pumps, etc. Of these the Stevens Foot-pump, the XX Century Nebulizer and Stevens Valve Mask were the special features.

TILDEN & CO., of New Lebanon and St. Louis, presented their usual attractive display. This house is as popular throughout the South as it is in the west. Frank P. Hunter of Portsmouth, Ga., their courteous and affable Georgia representative was in charge of the exhibit.

WILLIAM R. WARNER & CO., of Philadelphia, always the friend of the M. V. M. A. were on hand with an excellent exhibit in charge of A. D. Roach ("Deacon") and E. Penock, both of Louisville, Ky.

THE GLOBE MANUFACTURING CO. of Battle Creek, Mich., presented their Globe Multinebulizer Outfit, No. 63134, which indeed is complete in every detail. "Other attractions were the foot-pump, hand-nebulizers, etc. The "Globe" has become a necessity to the well-equipped physician.

MALLINCKRODT CHEMICAL CO. of St. Louis, the standard manufacturing chemists of the Mississippi Valley, were represented by Dr. J. A. Smith, of Wilmington, Del., and E. T. Green of New York.

KEASBEY & MATTISON, represented by W. E. Hancock of Richmond, Va., had their usual specialties well displayed.

DR. H. M. ALEXANDER & CO. of Marietta, Va., owners of the Lancaster County Vaccine Farms, the largest concern of its kind in the world, had a very instructive exhibit. Mr. T. J. Lynch was in charge.

THE SANITAS NUT FOOD CO. of Battle Creek, Mich., had a most unique exhibit. Their various food products are made from nuts. The Sanitarium Food Co., in the same exhibit, displayed a variety of grain products. Both concerns were represented by Dr. C. Geisel.

FAIRCHILD BROS. AND FOSTER, of New York displayed their reliable specialties in their usual liberal and instructive way. They have won many friends among the members of the M. V. M. A. with their standard preparations and their inexorable fight against substitution. O. F. Letorere had their interests in charge.

PARKE DAVIS & CO. of Detroit, represented by the prince of globe trotters, Dr. T. B. Whitmore, the eminent Japanese scientist, Dr. Jokichi Takamine, and by H. E. Heinitsh, again displayed the wonderful resources of this the largest establishment of its kind in the world. The special features of this exhibit were the serum products and chloretone.

JOHNSON AND JOHNSON, of New Brunswick, N. J., with their complete line of surgical dressings, were represented by S. E. Walters of Richmond, Va.

One of the most interesting exhibits was that of the MILLER RUBBER MFG. CO. of Akron, Ohio. The perfection of the manufacture of rubber specialties for physicians' use seems to have been attained by this company. The quality of their rubber is beyond comparison and the use of rubber has been greatly extended. Their ice caps, rubber gloves, water bottles and seamless specialties, etc., are the finest on the market. They were represented by Mr. J. Pfeiffer, the inventor of the improved process of manufacture and Dr. H. C. Merker.

MELLIN'S FOOD, so familiar to the "Baby World," was on hand and sought to give encouragement to the bottle-fed infant, through his physician. The woes of hunger and the throes of colic vanish before wisdom, mixed with Mellin's Food.

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SHARP AND DOHME, New York and Baltimore, through P. W. Hunter and F. O. Landis presented the merits of their hypodermic tablets, ergotole, etc.

THE LIBERTY CHEMICAL CO. of Philadelphia, represented by its president, Dr. S. Lewis Summers and Wm. H. Sutton, secretary, displayed its specialties, viz: Thermol, Iodomoth, Glycero-Phosphates, etc,..These preparations represent an advance in pharmaceutical chemistry worthy of much praise; they are essentially American and distinctively ethical.

The familiar name of TARRANT & CO. of New York was noticed in the exhibit hall, where the old reliable Allen dispensed the genuine Leopold Hoff Malt Extract.

HORLICK'S MALTED MILK, the familiar substitute for mother's milk, had its usual inviting display. Many there were who accepted the courtesies extended by Dr. S. Z. Bryson and tasted of this wholesome, reliable food.

The reliable IMPERIAL GRANUM CO., had a unique display. A phonograph, properly schooled as to the merits of this familiar food product, delivered an able address, inviting attention to infant feeding, etc. Music was interspersed here and there, all of which added to the attraction of the display. Souvenir stamp cases were presented to the visitors.

WAMPOLE'S MILK FOOD and Wampole's cod-liver oil preparations were the new specialties displayed by Wampole of Philadelphia. J. R. Ligon and J. E. Langley officiating.

Medical books were displayed by E. H. COLEGROVE & CO., of Chicago, who represented the standard works of Lea Bros. & Co.

THE PNEUMACHEMIC CO. of Cincinnati, represented by Dr. John Robertson, presented the pneumachemic inventions. This display attracted considerable attention, as the Multiple Nebulizing apparatus was unique and serviceable.

THE UNITED AGENCY CO. of New York, represented by J. Haldenstein, were liberal in their display of Apollinaris water and Apenta water. All of the drug stores of Asheville, had special window displays of these valuable waters and the exhibit in the hall was also large and complete. The banquets, etc., were supplied with Apollinaris and the compliments of the U. S. A. Co.

BLEES MOORE INSTRUMENT CO .of 906 Pine street, formerly of 213 North 10th, St. Louis, had the only complete display of surgical instruments. This exhibit attracted attention and made many friends for this deservedly popular house. F. L. Hurley did the honors on this occasion.

OUR GALLERY OF CELEBRITIES has just received an important addition in the photograph of the Antikamnia exhibit at the Paris Exposition, in which the President of the company, Mr. Frank A. Ruf, was caught in front of the camera. Antikamnia evidently made a good showing at the exposition, and increased its prestige through its exhibit. Merit and push are great when combined.

A NEW MEDICAL COLLEGE IN TEXAS.—"The University of Dallas" is the name of a new medical college to be inaugurated at Dallas, Texas. A charter has been obtained by an association of physicians—and a board of trustees appointed, of which Dr. S. H. Stout, the Medical Director of all the hospitals in the Southern Confederacy during the war, is President. The charter authorizes the incorporators to teach law, medicine, the arts and sciences, and to confer all professional and academic degrees usually granted by universities. At present only the School of Medicine will be inaugurated.

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Original Department.

PAPERS for the Original Department should be in hand one month in advance, and contributed to THE MEDICAL FORTNIGHTLY exclusively. A liberal number of extra copies will be furnished authors, and reprints may be obtained at reasonable rates, if request accompanies the manuscript. Engravings from photographs furnished free.

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Signature of contributor, for reproduction, should be sent with every article, on a separate slip; use heavy ink, and allow autograph to dry without applying blotter.

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Cophosis: Defective Hearing.

BY O. F. BAERENS, M. D., Ph. G.,

ST. LOUIS,

Professor of Diseases of the Ear, Nose and Throat, St. Louis College of Physicians and Surgeons; Oto-Laryngologist, Jefferson Hospital.

DEFECTS of hearing are so frequently met with in our practice, and the correction thereof is of such vital importance to humanity, that I do not hesitate to indulge in a brief consideration of a few phases of the subject at this time.

Defects of hearing depend on a variety of causes, and without a thorough knowledge of the anatomy and physiology of the hearing apparatus, it is difficult to institute intelligent treatment for transitory or permanent pathological disturbances affecting it.

Even with an accurate knowledge of the anatomy and physioiogy of the ear, treatment is by no means as easy as is that of other parts of the human body, because in ear work we are working in a cavity of small calibre, the depths of which are only visible by the aid of strong reflected light. The manipulation of instruments within this cavity is necessarily limited, and requires more than ordinary skill, as well as a delicacy of touch.

Among the first causes of cophosis, loss of the auricle might be mentioned. This appendage assists in collecting and conducting sound waves to the membrana tympani. While the loss of the auricle by accident or disease, will undoubtedly be followed by more or less imperfection in the auditory function, still it is not as great as is generally supposed. Quite a number of cases are recorded, in which, after the loss of the auricle, the deficiency in the hearing power which followed, was very slight.

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One case is recorded of a woman who had a congenital deficiency of the auricle and meatus of both ears, who notwithstanding held her conversations very well. In order to hear what was said to her she turned her open mouth to the speaker. She could hear nothing with her mouth shut.

Foreign bodies in the car canal necessarily produce more or less deafness. One case occurs to me at present. A farmer called on me, complaining of deafness in his left ear, which had persisted for seven years. No pain had ever been felt, nor could I obtain a history of discharge from the ear or of trauma. Examination by reflected light showed the meatus pretty well filled up by a dark mass. Touching it with the probe a distinct click was heard by both of us. Upon removal of the same it was found to be a smooth, oblong pebble, surrounded by cerumen. His astonishment at the sudden restoration of his hearing power was only exceeded by his delight.

Impacted cerumen furnishes us with many cases of defective hearing throughout the year. I have noticed a larger number apply during the milder seasons, and this is due to natural causes. There is more dust in the atmosphere, people indulge in riding, driving, cycling and athletic sports, and those with actively secreting follicles accumulate an inordinate amount of debris within their ear canals. It is astonishing how much of this material is harbored in this tract, and how long it is sometimes retained before the afflicted apply for relief. I recall the case of one man, about 40 years old, a poor laborer, who presented himself at the clinic for relief of his deafness, which had persisted for three years. Onset was gradual, no injury at any time, nor was pain ever felt in the ear. The watch could not be heard on hard contact. Bone conduction normal. Inspection revealed a canal entirely occluded by a brownish substance, which felt hard. Upon removal of the ear wax, the greater part of the plug fell to the floor, and *broke into fragments, so dry and brittle had it become.* A few moments after this a street-car came along, and the ringing of the gong caused a slight attack of vertigo. He was somewhat chagrined at the thought of his neglect in applying for treatment ere this, but his feeling gave way to one of happiness over his recovery.

Polypi have a place among the causative factors in the production of defective audition, their presence generally giving rise to discharges from the ear. The development of a new growth of osseous character in the auditory meatus, will, if any size is attained, cause defective hearing. They likewise serve to dam up the secretions, and subsequently to produce pressure on the membrana in this manner. They constitute a serious complication in all acute inflammatory troubles of the middle ear, interfering with the drainage of the fluid products of the inflammation.

The removal of polypi with the snare under cocaine anesthesia, with due observance of surgical cleanliness, will overcome the defective hearing as a rule.

The treatment of exostoses of the auditory canal is summed up in the word surgical. It is not within the scope of this paper to consider the vari-

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ous procedures, as all differ, and because of the various sites, position, size, and shape of the growths. Fine drills, burrs and chisels are the instruments usually employed for their removal.

In almost all conditions affecting the membrana tympani, defective hearing is included in the symptomatology. Thickening of the membrane, due to catarrhal conditions of the nose or to neglected otorrheas of childhood will interfere with its vibratory power. Calcareous deposits, seen in the aged or in those afflicted with a gouty diathesis, likewise prevent sound waves from entering and produce cophosis.

Partial or complete loss of the drum membrane as a result of disease or trauma, will produce defective hearing to more or less of a degree.

Occlusion of the Eustachian tube, either temporary or permanent, must be mentioned as an additional factor in the causation of defective hearing. This occurs as the result of inflammation of the mucus membrane in the naso-pharynx, chronic catarrh of the nose, as a sequel to scarlatina, measles, varioloid or influenza. The closure may be the result merely of the swelling of the lining membrane, or it may be caused by the formation of a plug of mucus, etc., in the tube. Permanent closures are the results of the same causes in which chronicity plays a part, or it may be due to a congenital closure. I believe these closures of the Eustachian tubes due to chronic catarrhal conditions are more frequently the cause of deafness, than any of the aforementioned conditions.

Chronic catarrh of the middle ear is met with every day, and too much stress cannot be laid upon due observance of prophylactic measures during the exanthemata and in chronic nasal or pharyngeal catarrh.

Adenoids in the naso-pharynx of children are known to produce cophosis, as well as a host of other distressing conditions. Hypertrophied tonsils (pharyngeal) often serve to mechanically occlude the Eustachian orifice, resulting in cophosis.

Diseases of the labyrinth induce deafness and tinnitus aurium, and certain drugs, such as salicin and quinine produce cophosis, owing to the hyperemia induced in the labyrinth by their administration.

New growths of the internal ear are fortunately a rare cause of deafness, and their presence are no doubt due to extension from the cranial or tympanic cavity of epithelioma or sarcoma.

Meningitis, disease of the hearing centres, tumors, etc., are among the intra-cranial causes of deafness. Of the treatment in cases of this kind it is unnecessary to speak, as it is practically nil.

In writing this paper its author intended to merely mention some of the factors entering into the causation of defective audition, trusting that some reader will fiud it sufficiently interesting to repay him for time spent in its perusal.

422 Commercial Building.

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Diagnosis of Tumors of the Spinal Cord and its Membranes.

BY FRANK PARSONS NORBURY, M. D.

JACKSONVILLE, ILL.

Formerly Resident Physician Pennsylvania Institution for Feeble-Minded Children; Formerly Assistant Physician Illinois Central Hospital for the Insane; Physician to Oak Lawn Sanitorium, Passavant Memorial Hospital, and Physician to the Illinois Institution for the Blind; Neurologist to Our Savior's Hospital; Lecturer Psycho-Physics, Illinois College.

Read at the Fiftieth Annual Meeting of the Illinois State Medical Society, Springfield, May 16, 1900.

IT HAS been comparatively recent that any absolute diagnosis of a localized affection of the spinal cord could be made. With the aid of the advances made in the study of the physiological anatomy of the cord and its spinal nerve distribution it has been made possible, so far as localization is concerned, to be exact in diagnosis. In fact it may be said that localization of organic diseases of the spinal cord is an exact science. It is true that there are observed many variations in kind and intensity of disturbed function of the cord, and that pathological processes are very varied, involving either or both the cord and its membranes. But, as the symptoms of organic disease, and especially tumors, affecting either the cord or its membranes are similar, it is necessary to study symptoms in common. Practical diagnosis recognizes the logical sequence of symptoms and does not accept as disease, what in many instances are purely symptoms; the fundamental disease causing them, being obscure and sometimes missed entirely, especially at the beginning of the disease. This fact should keep us on our guard so that we may anticipate symptoms, that will, eventually be more pronounced. Differential diagnosis requires an intelligent insight into the pathogenesis of tumors of the cord, although results thus far, show that in the beginning of a case it is almost impossible to determine the cause, and it is with difficulty that its pathological nature is surmised. When we consider, too, that tumors are essentially chronic in their course, that they are usually slow in their development, and that symptoms are confusing, we can readily understand how true is the statement made by Bruns and Winschied that "The diagnosis of an obscure cord tumor will always remain one of the most difficult problems."

It is necessary, therefore, that in order to arrive at a diagnosis, a careful analysis of the symptoms be made. There is no uniformity in the presentation of the symptoms of the tumor of the cord. Defective function is seemingly not commensurate with existing lesions in some cases, while in others the reverse is true. What is said here on symptomatology has reference to tumors as a whole, and not to any special class or classes of cases. In considering a case it is well that some definite system of observation be followed. A good plan is to first consider the general symptoms of tumors of the cord and its membranes, after which taking the individual symptoms, analytically, in order to determine, if possible, the location of the tumor, as to its relationship to the spinal column: to the membranes of the cord, and to the cord itself. That is, whether the tumor is extra-

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dural, intradural or intramedullary. Then the segmental localization of the tumor. The general symptoms of tumor involving the cord may be classed as follows:

1. Irritation of the nerve roots.
2. Meningeal symptoms.
3. Cord symptoms.

IRRITATION OF THE NERVE ROOTS.

As far as we had occasion and opportunity to observe the early symptoms, first to appear, were those of irritation of nerve roots. At the beginning the patient experiences disturbances of sensibillty—slight neuralgic pain which may be considered to be peripheral neuralgia. With the growth of the neoplasm the symptoms became more pronounced, and are essentially neuralgic, differing only in the fact that they do not follow the course of the peripheral nerve, but are always in harmony with the distribution of the spinal roots."

In one case coming under my observation, cervico-occipital neuralgia was the original diagnosis. The sensory symptoms are usually unilateral early in the history of the case, but in the case just mentioned this phenomenon was bilateral from the very beginning. It is to be noted here, that segmental diagnosis becomes of assistance as soon as evidence of destruction appear. The sensory symptoms first appearing as nerve root irritation become more pronouuced provided the lesion is in the posterior horns of the cord. And the motor symptoms due to interrupted conduction are gradually brought into notice and give a clue as to localization. Pain is almost constant and may become very severe. Eskridge says: "If some of the trunk nerves are the seat of irritation, the early symptom may be pain at the distal portion of one or two nerves, without pain or tenderness in any other portion of those nerves for a while." Numbness, hyperesthesia along the area of nerve distribution is noted and later anesthesia is pronounced. There may be trophic changes, wasting of the muscles, as in one case where the neoplasm caused destruction of nerve roots and the muscles supplied from this source were entirely wasted. Again, contracture and spasms are common symptoms, and exaggerated reflexes of the extremities are noted.

MENINGEAL SYMPTOMS.

There are no pronounced differentiating symptoms when the meninges are specially involved except when located in the upper cervical region when regidity of muscles of the neck, some other localizing symptoms, such as atrophy of the muscles of the upper arm group. The presence of Kernig's sign, would serve to indicate the involvement of the membranes of the cord. Some authorities believe their observation justifies them to make the sssertion that pain is not quite so severe in meingeal cases as in those cases having associated vertebral involvement.

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CORD SYMPTOMS.

The cord symptoms are those due to a gradual compression of the cord, viz., both motor and sensory paralysis (paraplegic in type), spastic symptoms, vaso-motor and trophic disturbances and changes in the reflexes. To determine whether the growth is intramedullary or intradural requires careful notation of the differentiating symptoms, and even then it often times is impossible to make this differentiation. Eskridge, of Denver, who by the way, is the leading American authority on tumors of the cord, says: "Cord symptoms manifest themselves early in intramedullary growths and are usually at first unilateral in character, but soon become bilateral." "If the tumor begins in one of the posterior horns of the cord, nerve root symptoms of a sensory nature are the earliest," but cord symptoms are apt to appear about the same time. In intradural tumors nerve root symptoms precede cord symptoms for several weeks. In one of my cases seven months intervened between the onset of neuralgic pains and the organic cord symptoms. Again, the organic change when anilateral may show itself as Brown-Sequard paralysis, viz., paralysis of motion on one side and of sensation on the other. In which case Eskridge says: The greatest loss of motion and disturbance of the deep reflexes with weakened muscular sense, occur on the side corresponding to that on which the neoplasm is located; impaired sensation, and superficial reflexes are most marked in the opposite side." Other features of intramedullary tumors are that muscular wasting is most marked in this form, while rigidity of the muscles is not so pronounced.

Motor paralysis varies in degree—it may simply be a mild paresis, but sooner or later the spastic paraplegic symptoms develop and when aggravated, render the patient helpless so far as locomotion is concerned. Church says: "Absolute motor loss is the great exception, and depends, like complete reflex obliteration below the lesion, upon division of the cord." In one of my three cases, complete paraplegia resulted, and in an interesting manner. The patient had sarcoma involving the seventh and eighth dorsal vertebræ and the ribs corresponding thereto, and marked deformity due to erosion of the ribs at their articulation. The patient had been under my observation and the surgical care of the late W. H. H. King, of Jacksonville; we had referred him to Dr. Nicholas Senn, of Chicago, but Dr. Senn at this time had left for Europe, and he came under the care of the late Dr. J. B. Hamilton. Dr. Hamilton had decided to operate, had arranged the time, and the patient was under preparation at the Presbyterian Hospital, Chicago. His courage, however, failed him and he left that institution to go to Kirksville for osteopathic treatment. He was promised a cure by these divine healers; in a few days the tumor in his side disappeared, but lo, suddenly he became paralyzed and suffered great pain. He begged for relief, but, no, these montebanks refused to give medicine; he telegraphed for friends and was brought home on a cot—a total paraplegic, and soon after died. The post-mortem examination revealing extradural tumor of spinal cord impinging upon the cord, but the paraplegia in this case was the result of pressure myelitis from displaced vertebræ. However, the

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prodromes of the case had pointed to a possible tumor of the cord, but they were largely the symptoms of nerve-root irritation. The reflexes, when cord symptoms develop, act just as in myelitis or the paraplegic state. Those involved in the growth are lost; those below the lesion are exaggerated, except where a complete transverse lesion occurs, when they are lost entirely. Muscular wasting, the reaction of degeneration, are noted, and when present indicate an intra-medullary tumor. Although I believe in one case of intradural tumor which Dr. Patrick saw with me, muscular wasting existed and was conspicuous. The involvement of the sphincters which I have noted in two cases, appeared, in one early because the lesion occurred below the lumbar enlargement, in the other it was a late symptom.

VASO-MOTOR AND TROPHIC DISTURBANCES.

Sweating is not unusual, in fact it may be very profuse, and may be limited to one side of the body. It was noted in one of my cases and involved the head and neck and upper extremity. Occasionally deep capillary flushings occur, they also may be unilateral. Herpetic skin symptoms, bed sores, change in the nails, etc., are trophic symptoms not unusual in such cases.

The localization of the tumor is determined by the ordinary rules of spinal localization. Tumors located in the cervical region or below, or in the lumbar enlargement are apt to be more speedily developed and more fatal.

DIFFERENTIAL DIAGNOSIS.

Caries.—In ordinary cases and in the usual location of spinal caries its diagnosis is not fraught with unusual differentiation. On the contrary, authorities teach that the diagnosis of spinal caries is not difficult, especially when the course is typical, viz., when the root and cord symptoms and the deformity occur in regular sequence. It is possible to have tumor of the spine having symptoms much in common with spinal caries, in which case a differentiation is to be made, and also the differentiation between spinal tumor and tumor of the cord or its membranes.

The great point in differentiation is, the presence of tuberculous foci elsewhere, which is decidedly in favor of caries. Bruns and Winscheid say "that a history of removal of a malignant growth from the patient at some time remote, would suggest the possibility of carcinoma," and add there is a difference in the deformity resulting from carcinoma as compared to that of tuberculous caries, viz., that in carcinoma the deformity is that resulting from the sinking of the spinal column and the height of the patient is reduced; a sharp hump is not present. Again, in carcinoma the root symptoms seem to be more violent and exist for a longer period than in caries. A long continued bilateral sciatica would suggest carcinoma. This I have confirmed in one of my cases in which the cord symptoms appeared at the same time in both sides—but preceded by bilateral sciatica, lasting several months. The patient had made the rounds of sanitaria, water cures, massage, osteopathy, etc., and had taken rheumatic cures *ad libitum*. I saw the case after the cord symptoms had developed, and made

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the diagnosis of spinal tumor, probably carcinoma. Compression paralysis followed, then myelitis and death. The patient was an adult, 54 years of age. Post-mortem examination confirmed diagnosis.

Caries should be suspected in young persons, and especially so when accompanied with the irregular temperature of tuberculosis, spinal tenderness and by the appearance of tuberculous involvement elsewhere. It is difficult to differentiate caries in the cervical region of the spine, and the root and cord symptoms may be like those of pachymeningitis.

But in what we are especially interested is the differentiation where the cord is involved. In caries the pain is limited in area; it is not intense nor agonizing as in tumor of the cord. There is usually tenderness on pressure over the suspected area; muscular rigidity is less in caries and we usually have a deformity.

Cervical Meningitis.—It is usually secondary to infection, as in tuberculosis and syphilis. In cerebro-spinal meningitis we have pronounced cervical symptoms. Caries may mask cervical meningitis. A history of traumatism would put us on our guard, for that rare form described by Charcot pachymeningitis cervicalis hypertrophica. The pain and sensory symptoms are not as conspicuous as the motor symptoms, due to the fact that the anterior and lateral portions of cord are most involved in meningitis.

Cervico-Occipital Neuralgia.—The points of differentiation are briefly as follows: It is more common in women, and apt to occur during adolescence when there is pelvic disease. There is a sharp boring occipital pain, it is usually unilateral paroxysmal, and there are tender points over the exit of the nerves. The pain of spinal root irritation is more continuous—there are no tender points to speak of and the pain is more exhausting and agonizing. The pain is apt to involve the fifth nerve. Cervico-occipital neuralgia may occur with spinal caries, and when accompanied with irregular temperature it is suspicious of beginning cervical spinal caries. The patient involuntarily limits his movements in caries to avoid jars, and often times has torticollis associated.

Myelitis.—Under ordinary conditions the diagnosis of acute myelitis is not difficult. The existence of motor paralysis, disturbed sensation, involvement of the sphincters (rectal and vesical paralysis), and the girdle sensation (cincture symptom) will lead to the diagnosis of acute myelitis and differentiate it from the systematic spinal disorders. Subacute and chronic myelitis are distinguished by more gradual developments of the prominent symptoms. In chronic myelitis we would consider the gradual growing weakness of the legs, the complete but transient loss of power occasionally; the slightly exaggerated reflexes gradually becoming more pronounced, and finally ankle clonus. Paresthesia of the extremities; the girdle sensation; muscular atrophies and trophic disturbances. The secondary disorders, such as cystitis and nephritis, finally develop and may cause death.

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Syringomyelia.—This rare disease is to be considered in differential diagnosis. Its symptoms have been carefully and fully classified during the fifteen years. Hinsdale says we now have "definite train of symptoms," and he arranges them as follows:

1. Intrinsic Symptoms—
   1. Symptoms of anterior poliomyelitis and motor symptoms (atrophy).
   2. Symptoms of median poliomyelitis, viz.:
      1. Trophic disorders.
      2. Deviations of spinal column.
      3. Vasomotor disturbances.
      4. Disorders of the sphincters.
      5. Ocular symptoms.
      6. Bulbar symptoms.
   3. Symptoms of posterior poliomyelitis.
2. Extrinsic Symptoms.
   1. Sclerosis of the lateral columns (spastic phenomena).
   2. Sclerosis of posterior columns (tabetic phenomena).

By carefully considering the order of Charcot thus arranged by Hinsdale, a differentiation can be made. We must remember that syringomyelia extends over a large vertical extract of the cord, and that it is chronic and may last for years.

NATURE OF THE GROWTH.

The history of tuberculosis in a family during the life-time of the patient, or evidence of the existence of enlarged glands or other scrofulous tendencies, would lead us to suspicion tuberculous tumor, and especially so when clinical phenomena in keeping with this suspicion are present.

The history of syphilis, its clinical evidence and the rapid development of symptoms would lead us to believe that a syphilitic tumor existed.

The history of carcinoma at some time remote, especially of the breast or coincidental would indicate possible carcinomatous tumor. Bruns (reported in *Progressive Medicine*) details an interesting case of metastatic growth found on the inner layer of the dura, not involving the extradural space, pia or cord, which proved to be carcinoma. It followed carcinoma of the breast. Very extensive involvement of the vertebræ by carcinoma may produce comparatively few symptoms. Sudden paraplegia may result without previous distinct symptoms of carcinoma, and may be due to giving way of the vertebræ, and thus cause compression paralysis.

Bruns says carcinoma of the vertebra is always secondary.

DISCUSSION.

DR. HUGH T. PATRICK, Chicago: I want to call attention to one slight omission in the otherwise excellent paper of Dr. Norbury. It occurred to me that he omitted the differential diagnosis of spinal cord tumor due to syphilis or gumma. The most frequent form of spinal cord syphilis is my-

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elitis. In the morally pure atmosphere of the classic precincts of Jacksonville they do not have probably spinal cord syphilis, but in the contaminated condition of our population of Chicago, we are very much alive to the existence of such a thing as it.

DR. ARCHIBALD CHURCH, Chicago: I wish to congratulate Dr. Norbury on his excellent paper. I consider it an important one, because spinal cord tumors are comparatively rare. When they do occur, they are in many instances not accurately diagnosed, and I wish to congratulate him upon the accuracy of the diagnosis in the cases to which he referred as having occurred in his own practice. I have seen four cases of tumor of the spinal cord, and the most distinctive symptoms were those relating to sensation. It is exceedingly difficult to make a diagnosis of tumor of the spinal cord. I undertake to say that the diagnosis, as it is usually made, is a tentative one, unless confirmed subsequently by operation or by post-mortem examination. The operation for this condition is largely exploratory, the hope being that the tumor has not too seriously invaded the cord and produced a destructive myelitis.

The first case I came in contact with I thought to be one of tumor of the spinal cord, but on inadequate grounds. The position of the tumor was located with definiteness, and after the skilful surgical intervention of Dr. Christian Fenger the tumor was found in the substance of the cord at about the fourth dorsal vertebra. Dr. Fenger split the cord longitudinally, and shelled out a tumor fusiform in shape, about an inch and a half in length. The patient rallied from the operation without any considerable increase in the paralytic features which had characterized the case before operation. The patient died from the occurrence of septic invasion in the operation wound. This is one of the few cases, if not the only case in surgical literature in which the cord was invaded for the purpose of removing a tumor. About that time, by a combination of opportunities of observation, I had made out an area of disturbed sensation over the lumbar and sacral cord. At about the same time Dana made out a similar area. These observations were subsequently confirmed. A case I saw recently corresponds to the type referred to. The patient suddenly lost power in the right leg and sensation in the left leg, preceded by girdle pains about the body. There was a small gumma on the side of the cord producing symptoms which subsided practically under treatment.

DR. NORBURY (closing the discussion): I have very little to add. These three cases were seen within twelve years; the first one was seen about ten years ago, the second nearly two years ago, and the last one during the past winter. Tumor of the spinal cord is a comparatively rare affection. As far as I am aware, only about two hundred and twenty cases have been reported in the literature up to the present time.

THE DOCTORS OF GALVESTON seem to bear a charmed life. In the great disaster that befell the city on the 8th of September, in which many thousand lives were lost, not one of the physicians perished.

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DISEASES OF THE LUNGS AND PLEURA.*

A Series of Papers written expressly for this magazine, by

BY ALBERT ABRAMS, A. M., M. D. (Heidelberg),

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[CONTINUED FROM PAGE 572.]

THE LUNG AND HEART REFLEXES.

The Lung Reflex.†—In a contribution by Moccucci‡ the suggestion was made that when ether was sprayed over the left half of the abdomen, marked reduction in volume of the spleen was observed in twelve cases. In repeating the experiments, I likewise noted a decided reduction in the area of splenic dullness in all individuals on whom the method was tried, irrespective of the fact whether enlargement of the spleen existed or not. Investigations convinced me that this diminution in the area of splenic dullness was not real, but only apparent. When the ether spray was directed over the region of the heart, the percussional area of that organ was reduced at once; in fact, the superficial area of cardiac dullness could be obliterated by the maneuvre. Similarly, when the spray was directed over the hepatic region, the superficial area of dullness of that organ could be reduced at once. When the spray was directed over the border of the lungs posteriorly, the lung borders could be made to descend from two to four inches, dependent on certain conditions. It was further ascertained that dislocation of the lung borders by forced inspiration never approached the dilatation of the lungs produced by the cutaneous application of the ether spray. Further experiments demonstrated in brief the fact that the application of any cutaneous irritant, whether the latter are mechanical, chemical, or electrical, would always induce acute dilatation of the lungs. Even in emphysematous individuals the application of a cutaneous irritant still further augmented the existing lung dilatation. The question naturally arises, by what means can we establish the fact that the application of any cutaneous irritant will cause acute dilatation of the lungs, a condition which, it may be mentioned parenthetically, is only of a few minutes duration? Such an hypothesis is made tenable by the aid of the conventional physical signs and the use of the fluoroscope. These aids show that when the skin is irritated by means of cold, by friction, or by a strong faradaic current, lung dilatation will ensue. The degree of lung dilatation is dependent on the character of the irritant and the severity of its application. The response of the lung to dilatation is always greatest in that part of the lung contiguous to the source of cutaneous irritation. Lung dilatation may be recognized by the following physical signs: 1. Diminished

* The first paper of this series, on "Cough," appeared in our issue of August 25th. The subjects for subsequent papers are as follows: "Pulmonary Anemia," "Pathology of the Blood," "The Heart and Lung Reflexes," "Pulmonary Resonance," "Meteorismus and Its Influence on the Thoracic Viscera."

† Medical Record, April 28, 1899; Transactions of the Medical Society of the State of California, 1899; the New York Medical Journal, January 13, 1900.

‡ Riforma Medica, page 208, 1898.

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respiratory excursions of the lung borders. 2. Extension of the pulmonary percussion note and obliteration of the cardiac and splenic areas of dullness. 3. Hyper-resonance of the lungs. 4. Obliteration of the apex beat. Auscultation is of no value as a physical sign, inasmuch as the artificial dilatation does not last longer than three minutes after the source of cutaneous irritation has been removed. Lung dilatation spreads from the source of cutaneous irritation, involving primarily circumscribed parts. In lungs showing diminished resonance, the latter can always be increased by cutaneous irritation over the part percussed. The X-rays shows how the brightness of the lungs is increased by cutaneous irritation. By gradually applying our irritant to different parts of the skin of the thorax, one may note that eventually the entire lung may be made to yield a more intense luminosity.

This increased luminosity, however, does not last longer than two and one half minutes in the average person, after which time the lungs resume their normal appearance.

In a number of measurements in the study of the lung reflex after cutaneous irritation, I found the average dislocation of the lower border lung as follows:

Right sternal line	3¼ cm.
" Paraster's ternal line	3¼ cm.
" mamillary line	4 cm.
" axillary line	6 cm.

In another communication§ I demonstrated that acute dilatation of the lungs can be invoked in healthy persons by irritation of the nasal mucosa and conversely that this condition can be dissipated after the removal of the source of irritation. The pulmonary neurosis of dilatation can be attained by firmly compressing cotton in both nasal cavities. The degree of lung dilatation with its concomitant phenomena will naturally vary according to circumstances which modify other reflex acts. After the introduction of the cotton, a few moments elapse before percussional results are noted. One will then observe super-resonance and immobilization of the lung borders and diminution of the areas of hepatic and cardiac dullness in the latter instance, even to obliteration. Irritation of one nasal cavity with cotton does not yield manifest results. If the mucosa of both nasal cavities has been thoroughly cocainized before the introduction of the cotton, no dilatation of the lung ensues.

I have frequently encountered in my clientele individuals presenting the symptomatic picture of pulmonary vesicular emphysema in whom was associated some abnormity of the nose. The anomaly was a simple coryza, spurs, deflection of the septum, hypertrophic rhinitis, or polypi. At any rate, after eradication of the nasal abnormity, the symptom of pulmonary dilatation disappeared. The form of emphysema here cited is in reality an acute dilatation of the lungs, an eradicable condition dissociated with the anatomico-pathological conditions conventionally allied with emphysema. The typical clinical picture of acute lung dilatation could nearly always be made to disappear by the aid of the cocaine test, which constitutes in this

§ New York Medical Journal, June 13, 1896.

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form of pulmonary neurosis a diagnostic aid of unquestioned value. After the application of a cocaine solution to the nasal mucosa the lung borders could be made to recede, and the lung resonance and normal vesicular respiration were restored.

In patients with asthma, presumably of nasal origin, impaction of cotton in one or both nasal cavities may induce a typic asthmatic paroxysm. This fact is of undoubted value in diagnosis.

The writer maintains that the phenomenon of lung dilatation can be provoked at any point in the extensive course of distribution of the pneumogastric nerves, and that the stimuli can act indirectly on the vagus nerves through the terminal fibres of the trigeminus, or, as he has already shown, by irritation of the cutaneous sensory nerves contiguous to the lungs. It is necessary to hypothesize the existence of two distinct functions of the vagus nerve, or at any rate, afferent fibres with two distinct functions; afferent fibres which can dilate (*broncho dilator nerves*) and afferent fibres which contract (*broncho constrictor nerves*) the lungs upon application of the appropriate stimuli. In the action of these two sets of nerve fibres, the vaso-constrictor and vaso-dilator nerves of the vaso-motor system may be cited as analogous.

THE HEART REFLEX.

If we irritate the skin in the precardia, a contraction of the myocardium is thereby reflexly induced. Receding from the precardial region, irritation of the skin will proportionately diminish the myocardial contraction. This phenomenon of myocardial contraction I have called the *heart reflex*, and it is manifest by means of the Roentgen rays and the fluoroscope. It is a sudden reflex of momentary duration, and like other reflex acts soon become exhausted. In studying this reflex, select children, or at any rate individuals with thin thoraces.

What is the practical value of these reflexes? In diagnosis the lung reflex establishes a clue to the diagnosis of the nature of lung dullness, whether due to consolidation or to atelectasis. If the latter is present vigorous cutaneous irritation will dissipate the dullness, whereas if the former is present it will persist. In pulmonary tuberculosis and in the pretuberculous condition, experience has taught me that the lung reflex is only slightly present. Whereas in the middle axillary line on the right side the average dislocation of the lower lung border after cutaneous friction in this region is 6 cm. in the pretuberculous condition, and in phthisis is only 2½ cm.

In treatment the lung reflex suggests many valuable lessons. It teaches us that in the development of the lungs vigorous cutaneous irritation by friction or the use of cold water is invaluable.

In *broncho-pneumonia*, where lung atelectasis deprives the patient of extensive areas of respiration, the application to the chest of cutaneous stimuli is invaluable in maintaining the lung dilatation.

The application of the lung-reflex test in the broncho-pneumonias of children has convinced me that, in the majority of instances, percussional dullness is dependent on the complicating atelectasis.

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The following cases are cited:

CASE I.—G. B., aged four years. After an attack of bronchitis of a week's duration, developed a sudden rise of temperature ranging between 104° and 105° F. in the rectum. Respirations shallow and 80 a minute. Pulse 100. Over the lower half of right lung the resonance on percussion is decidedly impaired, whereas on the corresponding part of the left lung dullness is decided. It is difficult to ascertain anything by auscultation, owing to the struggles and cries of the patient. The question naturally arose, is the dullness on both sides of the chest dependent on atelectasis, the result of enfeebled respiration or bronchial obstruction, or is the dullness caused by broncho-pneumonic patches of consolidation? Application of the lung reflex test, made by vigorous cutaneous friction of the skin of the thorax corresponding to the area of impaired resonance, demonstrated that, on the right side of the chest, normal resonance on percussion supplanted the cutaneous friction, whereas on the left side dullness persisted. It was manifest, then, that on the right side we were dealing with an area of atelectatic lung and on the right side with consolidation. When the area could later on be auscultated during the time the child was asleep, the absence of the breath sounds was noted on the right side and bronchial breathing on the left side. On the following day the right side of the chest did not respond, as on the previous day, to the lung-reflex test, and auscultation demonstrated bronchial respiration. It was manifest, then, that a portion of the lower lobe of the right lung had become involved in the broncho-pneumonic infiltration.

CASE II.—Aged eight years. Temperature 105° F. in the rectum. Previous history of a long-standing bronchitis. Dullness over the lower lobes of both lungs. Areas of dullness become resonant upon application of the lung-reflex test. Treatment was conducted with a view of demonstrating what local applications to the thorax were best adapted to maintaining lung dilatation. Friction of the skin of the thorax, and cold and warm water affusions were used in rotation, all with only momentary effect on the collapsed areas of lung. The application of hot poultices gave unequivocal demonstration of the fact that they were best adapted to counteracting lung collapse. This is the usual local treatment I adopt in bronchopneumonia, and my results certainly justify a continuance of its use. The prognosis in the latter case was regarded as favorable, owing to the persistent positive reaction of the lung reflex test.

I have referred elsewhere to the value of the *heart reflex* in diagnosis and treatment.* Let me illustrate its value in diagnosis by the following observation, which is here published for the first time: If, in *dilatation of the heart*, from any cause, irritation of the skin in the precardial region is made, we note a diminution in the area of cardiac dullness. The diminution in the cardiac area is due mainly to lung dilatation (*lung reflex*) but in part to myocardial recession (*heart reflex*). Myocardial recession is more permanent than lung dilatation, for after a space of three minutes, a time beyond that necessary for the lung to resume its ordinary position, a dimin-

* The Medical News, January 7, 1899: the Philadelphia Medical Journal, January 6, 1900.

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ution of the cardiac area persists. Now, if there should be any doubt regarding the time necessary for the lung border to be restored to its normal position the lung border somewhere else, say over the liver, should be selelected as a basis for comparison. If after three minutes the lung-liver border recedes after cutaneous irritation, we are justified in continuing our observations on the heart. If fluid is effused in the pericardial cavity the lung reflex will be present, *but not the heart reflex.* I regard this sign as one of the most trustworthy in *pericardial effusion.* Reference to the accompanying illustration will make my meaning clear. A represents the area of cardiac dullness showing dilatation of both ventricles. Black area represents cardiac dullness after cutaneous irritation of the precardia. B. Persistent diminution of dullness after subsidence of the lung reflex, the lung resuming its normal position, but the heart reflex persists.

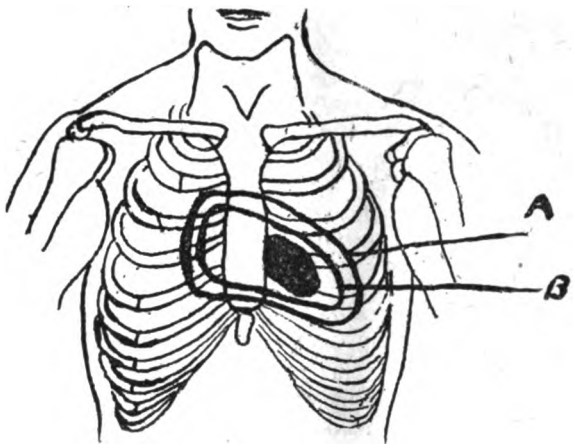

FIG. 4.

If this increased area of precardial dullness were due to a pericardial exudate, then, with recession of the lung borders after subsidence of the lung reflex, the area of precardial dullness would be the same after as before the elicitation of the lung reflex.

[TO BE CONTINUED.]

TAKING MEDICINES ON AN EMPTY STOMACH.—Everything affects the stomach much more if the organ be empty when it is taken. It then comes at onces in contact with the organ, whereas, if food be in the stomach it is involved in this and diluted. A dose, for example, of prussic acid, which does not disagree after breakfast, may occasion sickness if taken before breakfast; and many persons who have taken arsenic and other poisons with the intention of suicide soon after a meal have been disappointed of their end, which they would have made sure of by taking it fasting. All acrid substances, too, affect the stomach much more if taken in fluid form, in which they come suddenly upon the stomach; whereas, if wrapped up in the form of a pill they are only slowly dissolved, and operate gradually upon the organ.—*Health.*

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The Medical Treatment During the Adolescent Period.

BY EDWIN ROSENTHAL, M. D.,

PHILADELPHIA.

Chairman of the Section on Diseases of Children of the American Medical Association; Pediatrist to the Franklin Free Dispensary, Etc.

THE adolescent period in the female may be said to be as critical in results as the menopause, and by reason of the methods of our education may be said to be one of the best known conditions universally recognized, and as such, the common property, not only of the profession, but also of the laity. For this reason, it is not an uncommon fact, to witness, not only the diagnosis of this condition being made by the "officious meddler," but also treatment. And it is very often, when such treatments have failed, that the patient is brought to the doctor. In such instances great care and discernment must be the weapons of the doctor, for it will be noted, that recourse to all the old well-known remedies had been applied before further advice is sought. The commonest symptom that presents itself is the one that refers to the menstruation. And it is in all probability that this disordered condition is the most conspicuous factor that needs correction.

Two classes of cases are most numerous, and may be divided into: 1st. That class that has never menstruated, and 2d. That class, that may have begun, shown a very slight discharge at infrequent intervals—once in six or nine months—but which has never grown to an extent at any time that may be termed a normal flow. The history of these cases are very generally of the same character, and may be briefly summarized: Digestive disorders, headaches, languor, flushing, sensations of fullness in the abdomen, disturbed or unnatural sleep, or sleepy conditions during the daytime; often some cutaneous affection—acne the most common. Whilst the symptoms may be present in some, frequently only part of them may be present in certain cases, as the skin affection. During the period that should be termed the "menstrual" period the symptoms are generally aggravated. If the "acne" be present, at this time, a fresh crop of pimples appear, and thus can be noted other symptoms.

In all cases of menstrual disorders in the young, the cause must be sought for, and if found corrected. This of certainty directs the treatment. In cases where the menstruation has never appeared, it should always be a certain rule, to have the sufferer examined by the mother. In quite a number of instances, anatomical reasons have shown the reason. In four cases an "impervious hymen" was the cause. In two cases the "uterus" became the receptical, and contained the result of numerous menstruations, becoming enlarged even above the pubic bones; the cervix being impervious. In several instances there was an entire absence of the uterus and ovaries. This I noted in two cases, both married, and were examined for the reason. In one case, an otherwise well developed young woman, age 21, there was an absence of a vagina. Such cases as thus enumerated, nothing can be done in the line of medication, but judicious surgical pro-

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cedures may in indicated cases (impervious hymen or cervix) make a cure. Where, however, no necessary organs exist, nothing can be done, except such rules, as the regulation of the bowels, etc., at stated intervals, give much relief to the frequently present nervous symptoms. Where, however, no anatomical reasons exist, and the patient suffers from suppression of the menstruation, entire or in part, much can be done to aid a cure?

The question of age frequently enters as an answer to results. We have with us such a conglomeration of different nationalities, that the "age" question is a very vital one. Inasmuch, as frequently, the treatment of menstrual disorders may be wrongly applied, as an example: To attempt treatment in a girl of 13 or 14 years, when her mother only began menstruation at 12 years. Experience has taught me, that girls born in warmer countries, or descending from such parentage, begin to menstruate much earlier than those of colder climes. For instance, girls from Italy or Cuba, begin at 12 or 13, where those from Norway or Sweden begin at 15 or 16 years. Again, in races I have seen some surprising differences. The colored race have presented a girl of ten years, and often, I have seen girls of Russian-Jewish parentage begin at 10 or 11 years. So that the question of age should always enter into the treatment.

Whilst the most common symptom of disordered menstruation is "anemia" and as the better known "chlorosis," or vulgarly "green sickness," its absence need not prelude the use of the most common of all our remedies—iron. Anemia alone may be the cause of suppressed menstruation, and while its presence may be looked upon as a certain cause, its treatment is as essential for the appearance of the menstruation, as it should be for the general health of the patient. That anemia in girls is most frequently found at this time, leads to the common belief that anemia, green-sickness, or whatever name this blood condition may receive, is the chief factor in menstrual disorders.

The treatment of such conditions are numerous; and should divide itself into the causative factor first, and then after this has been relieved, to the specific symptom. In other words, it will be wrong to attempt by the use of specific remedies the appearance of the menstruation, if the physical condition of the patient is such that should not permit it.

Besides the condition of the blood as a cause of suppressed menstruation, other well-known conditions equally play a prominent part. Even if the patient should suffer from such diseases (tuberculosis as an example) the presence of a menstrual flow has such an encouraging influence upon the minds of the sufferer, that some attempt should be made, and as the method pursued by myself for many years can only be of benefit, such conditions are not contraindications for its use.

Iron is the chief remedy in menstrual disorders, and may be given at all times—before, after or during the flow. A certain time in the life of the patient should be set apart for active and specific treatment. The time chosen should be when the symptoms are most aggravated. The days, one, two or three, should be set apart, and our treatment should al-

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ways culminate to this period. If we fail at the one, then we should begin again, and pursue our treatment until the second period, when the specific method should again be applied, and thus on. Even if failure should mar the first, second, or even the fifth period, the menstruation will appear, if the treatment be applied in a rational way.

Between the periods I always order the use of iron in three or four daily doses. I have used all forms and varieties, from the tincture of the chloride, which is so often objected to, to the different kinds the pharmacopœia presents, in pill form, as the Blaud pill, simple or modified. My experience brings me back to the manganate. The pepto-manganate of iron is now the most common in use, and there are so very many makes in the apothecaries that some care must be taken in chosing the best. I have a simple way of distinction. I always order the iron given with milk. If the mixture is clean, uncoagulated and palatable, then I know my patient has received what I ordered. For a further distinction, I invariably place on my prescription the name "Gude." My reasons are these: So very many pepto-mangans are on the market that are inferior, and in a measure do not act in the manner you wish, clinically as well as physically. For my own defence, as I have been so frequently disappointed, I detect the fraud of substitution by mixing with liquids, especially milk; the "Gude" preparation always gives the palatable mixture.

I order of this preparation a teaspoonful in a wineglassful of milk every three or four hours, depending upon the patient's condition. If she be very anemic, and with this very nervous, I place her upon the milk diet, and by the addition of the iron I reach my object, giving the food as well as the medicine. I increase the dose until a tablespoonful, three or four times daily. This treatment is kept up, and even continued through each period, until the purpose is obtained, perfect health, as regards not only the menstrual flow, but also the general physical condition.

Medical treatment is never sufficient in these class of cases, and failure is apt to result if no attention be given to other conditions; the very common class, the school girl who desires to reach the head of her class, or who studies for a prize or the like. Take the following case:

CASE I.—E. L., age 17 years; large in growth, over 5 feet 8 inches; reddish hair. A student of the Girl's Normal School, preparing for the teacher's certificate, which required two more years of study after the graduation. Complains of constipation and headache. Has acne on each cheek. Has occasional backache, and has an occasional attack of "nervousness," crying, etc. Her menstruation is scant, very irregular, and when it does appear, not more than one day, or probably one-half the next. Appetite erratic, though spoilt by the method of eating, as buns, or cake or a pie for lunch, whilst the breakfast hurriedly eaten, was only a cup of coffee, or a roll. Her main food was the "supper-dinner," when she was "too tired or too long hungered" to eat. Once or twice I was called to quiet an hysterical attack. In this case the pimples were the bane of the young lady's life, and while she was not anemic in any sense, I placed her upon the (Gude's) pepto-mangan, telling my patient that this

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medicine was for the pimples, and that I left the further treatment in her hands. This with purgative pills of aloin with nuc vomica was the whole treatment. Vanity came to my assistance, as the patient desired to be rid of the eruption. Persistent use of the iron was the only medicine used, and whilst the schooling was persisted in, she passed through the period, and eventually recovered.

The second case is one that is too frequently met with, the child of the poor, who is sent too early to the "mill" or "store" and who has never been taught the commonest rules of hygiene; the girl who spends her time in work, and whose only outing, a dance or picnic, is equally as hard work.

CASE II.—Age 14 years. Attended school until 12 years, and then became a cash-girl in a department store. Rather large for her age. Flabby built, and of a distinct pallor. Complains of obstinate headache, relieved by the so-called bromos; indigestion, languor, sleepy during daytime, and at night a sleep that was heavy, unnatural and disturbed by dreams; at intervals flushing with sensations of chilliness. Menstruation scanty, probably a half of one day, and very light in color. In this case work was a necessity, and even proper food could not be obtained. However, milk was the easiest and cheapest food, and from one to two quarts daily was the constant supply. To this food I added a teaspoon of the Gude's pepto-mangan at each glassful, once every three hours, increasing until a tablespoonful dose was attained. This with a purgative pill (the compound rhubarb pill of the Pharmacopœia) was the treatment persisted in for over eight months, with complete recovery. In this case the treatment was begun in the fall of the year, persisted in through the winter months, and during the following summer months a vacation of but two weeks was obtained, and the patient sent to the seashore by one of our charitable institutions. This patient was convinced of the utility of this method of treatment, as I found the following winter the same course was followed with a gratifying result; preventing any loss of time by reason of illness or otherwise.

I have also met with cases that the menstrual period came on correctly at a certain age, and continued so for a year or two, when, for some unknown reason, there was total suppression. There was no history of tubercular disease, nor could I obtain any certain cause. In one case marriage was undertaken as a hope for cure. This patient, aged 18 years, came to me with the following history:

CASE III.—Mrs. B.; began menstruation at the age of 13 years; regular intervals until 15 years, when the flow became scanty and scantier, until only a half day, and then entirely disappeared. She had not seen a flow for two years. Examination revealed the uterus two inches in length somewhat antiflexed. The ovaries on each side conld be felt, the size of an almond, the tubes could also be felt. This patient had been under the care of many physicians, and had had several operations, even a laparotomy, for the abdominal scar was visible. Nothing had been removed she assured me, and the examination showed this also. Dilatation of the uterus had been performed, as well as curettement, for what I was not in-

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formed. She had also undergone electrical treatment. I treated this patient constantly for six months before a flow of blood was in evidence. My sole treatment was the internal use of the pepto-mangan (Gude's) in tablespoonful doses in milk, and the use of a stem pessary for a period of nine months. After this time an examination revealed the uterus two and one-half inches in length, larger in size. The tubes could be felt, and the ovaries on either side somewhat larger. Monthly flows have now been the rule for the last three months. This patient is still under treatment, and whilst the iron is still persisted in, the result of the treatment is uncertain. I am firmly persuaded that many cases can be benefited by a correct application of our remedies, and when applied for a certain purpose.

This last patient appeared hopeless, and at the start I had little hope myself that much could be looked for. It appeared as a case of early menopause. I have seen such cases, with atrophy of the organs. Here, however, this was stopped, and I have still hope of seeing further improvement.

I have seen such good results in the use of the iron in septic diseases, that I have applied it fearlessly in other conditions. None give better promise than those conditions that are coupled with the menstrual flow, especially when seen at the adolescent period.

517 Pine street.

Cystic Irritability with Incontinence of Urine in Adults.—

℞ Fld. ext. ergot..... ʒ iv
Tr. ferri chlor..... ʒ iv
Tr. opii deod..... ʒ j
Spts. nit. dul..... ʒ ij
Syr. pruni virg..... ℥ iss
Aqua menth pip..... ʒ j

M. Sig.—Teaspoonful morning and night.—*Summary.*

Sugar in the Urine.—The *Scientific American* gives what it is claimed is a delicate test for sugar in the urine:

℞ Cupric sulphate ..... gr. xxvii
Glycerine..... ʒiii
Aqua..... ʒ iiss
Liq. potassa..... ℥ iv

Dissolve the cupric sulphate in glycerine and heat. When cold add the liquor potassa. Pour a drachm of the solution in a test tube with two or three drops of a saturated solution of pure tartaric acid and boil. Now add, drop by drop, eight drops of urine. If there is no reaction there is no sugar. Sugar is present if the reaction yields a yellowish, reddish or greenish-gray deposit.

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Reports on Progress.

COMPRISING THE REGULAR CONTRIBUTORS OF THE FORTNIGHTLY DEPARTMENT STAFF

GENITO-URINARY SURGERY.

BY BRANSFORD LEWIS, M. D.,

Professor of Genito-Urinary Surgery, Marion-Sims College of Medicine.

Assisted by J. L. BOEHM, M. D.,

ST. LOUIS.

[Translations from Centr. fur die Krkheiten d. Harn und Sexual Org., Bd., XI, Hft. 6.]

Causes and Treatment of Prostatic Abscess.—A. Routier (*La Presse Med.*, No. 13, February 14, 1900) points out how seldom prostatic abscess occurs in cases of a healthy urethra; most commonly it is a result of gonorrheal infection, very seldom from other infections. A previous trauma is often the cause for the formation of this abscess. Catheterization during the course of a urethritis, unskillful and careless injections, sexual excesses or direct strain on the perineum, as in sitting in long railway journeys. or riding on a wheel, is often an exciting cause. The treatment, according to Routier, is deep incision with a guide.

Treatment of Prostatic Tuberculosis.—(Sarda, Toulouse, *Archiv. provincial de Chirurg.*, No. 3, March, 1900.)—In treating prostatic tuberculosis by local medication there is little success. Often surgical treatment is not desirable. It is best to incise the perineum in front of the rectum deeply, and then curette. If an abscess points in the perineum, an incision one finger's breadth anterior to the anus should be made. In tuberculosis of prostate without abscess formation, it is desirable to establish a perineal fistula. If a fistula exists it should be extended into the prostate. In performing prostatectomy, especially if the seminal vesicles are not to be removed, the long incision is recommended.

Herpes Genitalis.—(M. Gaucher, Paris, *Independence Med.*, 1899.)—According to the author, herpes caused by external irritants must be differentiated from that due to internal neuroses. Herpes following some internal disease may be localized on the gentalia. The common causes are, ordinary coitus, sexual excesses, blenorrhagic or chancroidal discharges of the female genitalia. As a modification the constitutional condition must essentially be considered. A local predisposition due to previous venereal disease of the genitalia need not be considered, since many suffer with herpes who never had any venereal disease. For treatment the author uses starch or talcum and alum mixed together. As a systemic treatment, arsenic and sulphur baths.

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Treatment of Surgical Tuberculous Affections.—(W. Cheyne, *Lancet*, December 30, 1899.)—Of the male reproductive organs, tuberculosis of the epididymis is the most common. With this as a nidus the process extends to the testes, seminal vesicles and prostate. A contraindication to operation exists when the disease is of a chronic character, showing a tendency of healing. In such cases attention should be given to the hygiene and building up of the constitution; and when suffering much pain inunction of belladonna ointment is desirable. Operations of curetting, epididymectomy and castration are performed. In the early stages epididymectomy is a satisfactory, radical procedure, and should be followed by curetting. Since castration in most instances is bilateral, and there is a probability of mental depression following, it shold only be performed in case of absolute necessity. Tuberculosis of the bladder is usually secondary to renal tuberculosis, and goes on to ulceration. The treatment may be medical and surgical; in neither method is there ony positive result. Injection of iodoform emulsion is of little avail, silver nitrate is often painful and injurious. Opening and draining the bladder is often followed by good results. On the other hand, curetting and cauterizing may be tried. Cheyne treated five cases by this method; in one there was an undoubted cure. Renal tuberculosis is common. Before every nephrotomy, we should determine the seat of the lesion and the condition of the other kidney. Nephrotomy is only a temporary preparatory measure for an ultimate nephrectomy. The latter is contraindicated if other organs are affected. Partial nephrectomy in the early stages has produced good results.

Renal Tuberculosis.—(König and Pels-Leusden, *D. Zeitschrift f. Chirurg.*, Vol. 55, No. 12,)—In the clinical report of this article, which is very instructive, Konig concludes: There are two forms of incipient renal tuberculosis, which are observed by the physician, viz., the isolated tuberculosis of the glomeruli with no communication with the renal pelvis, and that tuberculous process found in the renal pelvis. The first form often passes into the second. The diagnosis of the first form is often very uncertain. In comparison with this is the clinical diagnosis of the second form. It is to be regretted that the diagnosis is not commonly confirmed by the finding of bacilli. We cannot be absolutely certain of the normality of the other kidney; the most practical and surest diagnostic means is the cystocopic and ureteral examination. [At present, the inoculation of a guinea-pig with the urine of the patient, is probably the most reliable procedure. If possible, it should be drawn from the two kidneys separately by ureteral catheterization.—B. L.] The operatlve treatment of tuberculous kidney is on the whole only to be undertaken when signs of wasting appear. Nephrotomy and renal resection do not suffice in renal tuberculosis. The field of nephrectomy is much larger now than formerly; whilst formerly we thought the absolute safety of the other kidney demanded an extirpation of the phthisical kidney, we now know that following extirpation patients live for years, and survive tolerably well even with disease of this remaining kidney. Furthermore, patients who have bladder disease at the same time are greatly benefited by an extirpation of the phthisical kid-

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ney. Corresponding to these two forms of renal tuberculosis, there are two classes of results from operation. In the first class by extirpating the diseased kidney the disease is totally removed. Patients of the second class are not absolutely cured. They still have one tuberculous kidney, vesicle tuberculosis, the testicle and urinary tract are abnormal, but nevertheless this class is remarkably benefited by removal of the phthisical kidney. Part II of the article contains a macro- and microscopical description of 16 of Prof. Konig's extirpated kidneys. Dr. Pels-Leusden concludes his observations with the following: 1. In all cases of renal tuberculosis in which the diagnosis can be positively made, an extirpation of the kidney is absolutely necessary. 2. In the majority of cases the pelvis and ureter are affected. The extension of the disease in the parenchyma and pelvis is as a rule so diffuse that a partial resection does not appear sufficient to stop the morbid process. 3. A spontaneous cure of renal tuberculosis is not to be expected. 4. The dissemination of tuberculous foci in the kidney occurs very commonly in the form of lines of tuberculous deposits along the course of the uriniferous tubules, having a similar course as pyelonephritis.

The Clinical Significance of Casts.—Kobler, *Wiener Klinische Wochensch.*, No. 14, 1900).—At the present time the finding of granular and epithelial casts does not absolutely signify the morbid condition of Bright, whilst formerly this was considered as proof positive. Kobler studied this question carefully, and concluded, that the presence of casts does not always justify a diagnosis of Bright's disease. The true significance of hyaline casts is not known. Granular and epithelial casts are often found when no morbid condition of the kidney exists, but when there is gastro-intestinal disease, especially when the latter is accompanied by violent diarrhea. This causes a lowering of the blood pressure on account of the rapid loss of water; hence a faulty metabolism of the renal epithelium and formation of casts and albumin. On the other hand, Kobler has found these casts when obstipation exists. This conditien is preceded by pain, which at times is very severe; this pain is considered as a reflex to the contraction of the kidney capsule, which consequentiy deprives the renal epithelium of its proper nutrition.

Operation for Tuberculosis of Seminal Vesicles.—(M. Moullin, Edinburgh Medical Society, January 8, 1900.)—Moullin reports two cases of tuberculosis, in which he excised the testicles and the seminal vesicles through a transverse incision in the perineum. Both cases improved; in one a urinary fistula remained for several months. Moullin recommends this operation for all cases of tuberculosis testes, in which the seminal vesicles can be plainly palpated in the rectum.

Treatment of Chronic Urethritis with Instillations of Picric Acid.—(Desnos and Guillon, *Journal des Maladies Cutanees et Syphilitques*, Vol. 10, 1899.)—The author used this method in 29 cases; it is only to be used in chronic cases, and not in primary attacks, and in acute exacerbations of old cases. By means of an instillator and a four-grain Guyon syringe, from 20 to 80 gtt of a ½ to 1 per cent solution is used. This must be repeated every second day. Tuberculous cystitis may also be influenced by picric acid.

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MEDICINE.

BY FRANK PARSONS NORBURY, M. D,

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AND EGBERT W. FELL, B. S..

JACKSONVILLE, ILL.

Some Points in the Therapeutics of Heart Disease.—(Thompson, *Med. Record*, March 17, 1900.)—In all chronic heart diseases every function of the body should be kept in the best condition to help the laboring organ. Only temporary relief can be obtained from such remedies as digitalis, strophanthus, strychnine, spartenil, etc., and permanent improvement must come from measures which improve nutrition, and not those that stimulate function. Fresh air systemtically and continually provided without effort by the patient is the most important of these measures. The author always uses iron. Bichloride $\frac{1}{24}$ grain three times a day for a week is efficient in endocarditis. He has also used sodium iodide 5 grains three times a day in chronic cardiac enlargement accompanied by arterial disease.—From abstract in *Med. Age*.

The Heart in Life Insurance.—(Upshaw, *Atlanta Jour. Rec. of Med.* April, 1900.)—Policies are often refused unjustly, and on the other hand, are often issued when they should not be. An applicant with a functional murmur, either hemic or from reflex irritation from overwork, indigestion, etc., should be re-examined at short intervals to determine the true condition of the heart. A bruit without hypertrophy or displacement to the right does not affect the risk. Cases in which an acute endocarditis with valvular lesion in childhood was recovered from with perfect compensation, and a normal circulation should not be rejected. In obese persons past middle age any irregularity should be looked on with suspicion. No risk is first-class when the sound of the valves fail in clearness and is muffled, showing rigidity and loss of elasticity. In applicants who are reformed alcoholics the chance of changes in the heart walls allows them to be rated as fair only. Tobacco heart is a practical entity, and sudden death from heart failure is not so uncommon as to preclude the gravest consideration in determining the value of such a risk.

Myocarditis in Infancy and Childhood (Koplik, *Med. News*, March 31, 1900).—Any autopsy on a child dying of an infectious disease will show changes in the heart muscle sufficient to cause death. Foci of degeneration exist, other portions of the muscle being quite normal. Experiment has shown that the myocarditis is not produced by the prolonged high temperature, but by the action of the toxins directly on the muscle cells; the nerves show no change whatever. These myocardial changes are not necessarily fatal, the infant's or child's heart seeming to be particularly capable of restoration to the normal. It is impossible, with our present

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knowledge, to formulate a table of symptoms which in infectious diseases could be traced to myocarditis. The original disease masks the heart symptoms. We have, however, a certain definite set of symptoms which supervene after the myocarditis has become developed, pointiug to functional weakness in the muscle, as evinced by the feeble, disordered action of the organ. Antitoxine in diphtheria will prevent myocardial changes, if used before the third day, but if later these are likely to appear. The toxins developed by a strepto- or staphlococcus throat disease may also by their action on the heart muscle cause weakness and irregularity. Malarial poisoning may have the same effect. In pneumonia derangement is apt to occur at the onset, at the appearance of crepitant rales, at the crises, or during convalescence. There is oftcn evidence of poor heart action in the beginning, and it is sometimes impossible to say whether the heart was primarily fatty, or whether myocardial changes were caused by the toxin. The presumption of the latter is very strong. Weakness of the myocardium may be caused in prolonged cases of pertussis, not only by the strain, but also by toxic influences. Infectious diseases occurring during a subacute endocarditis following rheumatism is apt to affect the heart badly. Degeneration of the myocardium extending from the pericardium is the most serious condition, as there is actual destruction and replacement by connective tissue. Although we cannot always make a positive diagnosis of myocarditis during an infectious disease if we have attacks of faintness, pallor, vomiting, disturbed and very irregular heart action, and distortion of the respiratory and pulse ratio, we should suspect myocardial degeneration. An examination of the heart reveals extreme weakness of apex beat, weakness of first sound or loss of its muscular quality, and greater intensity of second sound at apex and pulmonic orifice. In the treatment powerful drugs should not be employed, but the strength fostered with the object of healing the diseased foci.

Recent Methods in Cardiac Therapeutics by Baths and Exercises (Satterthwaite, *Med. News*, March 10, 1900).—The exercises are chiefly voluntary, and consist in flexion, extention, adduction, abduction and rotation of the limbs, neck, and trunk by the patient, while the operator opposes graduated resistance. Passive respiratory movements are also used. The exercises should at first be short, and gradually increase in length and force. The patient should at the same time take exercise in the open air, but avoid physical or mental strain and overeating. For a six weeks' course the baths are given as follows: First week, half per cent salt bath at 98° F., duration four minutes. Second week, three-fourths per cent salt and one-fourth per cent carbonic acid gas, temperature 97° F., duration six minutes. The strength is gradually increased until oh the sixth week the bath is two per cent salt and one per cent carbonic acid gas at 93° F. for fourteen minutes. Baths and exercises are omitted every third or fifth day. The exercises and baths improve the superficial and deep circulation, the blood is invited to the skin and limbs, preventing congestion of internal organs, relieving the heart of the internal pressure and given an opportunity to contract. The muscular movements act by

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emptying the lymphatics and veins, diminishing peripheral resistance. The effect of the baths is due to the warm brine, and to the anesthetic and stimulant effect of the carbonic acid gas and calcium chloride. The baths slow and strengthen the heart and also increase renal secretion with disappearance of exudations. Rheumatism, gout, chlorosis, typhoid fever and some functional and organic nervous disorders are improved by this treatment. It should not be used in Bright's disease where there is serious involvement of the parenchyma of the kidney; in Grave's disease with dilatation in extensive cardiac dropsy, and in advanced stages of phthisis the treatment is of no value. During the course heart tonics and stimulants should be used only as a last resort, the object being rather to remove obstacles to the circulation than to compel a weak heart to forceful contractions.

The Effects of Diet in Nephritis (Davis, *Chicago Med. Rec.*, March, 1900).—Toxins generated by abnormal fermentation within the gastro-intestinal tract are most important causes of nephritis. If digestion is normal prior to the attack the acute fevers are rarely followed by nephritis. Yellow fever and cholera, diseases in which the intestinal functions are markedly affected are usually followed by nephritis. Cold and wet are important causes only when they bring on rheumatoid diseases. The influence of overeating and injudicious eating in producing chronic nephritis is well known. Chronic diffuse nephritis grows out of the acute disorder, and may also be caused by excessive use of alcoholics. The interstitial form is due either to atheroma caused by hard work, physical or mental, and hearty eating, or to the toxins which produce the uric acid diathesis, and which are generated by excessive eating of meats and leading a sedentary life. The prevention of fermentation within the intestinal tract is of the utmost importance. The extractives of meats and the toxins produced by putrefaction of albuminous food are irritating. A case of acute nephritis should be put to bed, all food withheld for twenty-four hours and the alimentary canal emptied. Milk should be given in small quantities at first, and increased till two quarts per day are taken. Milk is especially adapted to these cases, as it is nutritious, easily digested and absorbed, and if it is not palatable the dislike for it may be overcome by addition of starchy foods, sugars or fruits. Albuminous foods may be added gradually according to the conditions of the urine, but red meats should be withheld. In chronic diffuse nephritis a milk diet for a short time is necessary, and may then be alternated with a mixed diet. Breads, butter, potatoes, beans, green vegetables and fruits are permissible, but meat extracts and meats rich in extractives should be forbidden. Egg albumen is least harmful, then comes squab, chicken, ham, cold pork and lamb. Beef, mutton, game and the coarser fish must be forbidden. Meats should be broiled or boiled. In interstitial nephritis the diet must be determined largely by trial in each case. A mixed diet is safest except during acute exacerbations, when milk should be used exclusively. Care should be taken not to overtax the digestive organs; red meats should be let alone, and milk, fats, butter and farinaceous foods eaten freely. At least two quarts of liquid should be taken daily, coffee and cocoa may be used in moderation, but alcohol must be strictly forbidden.

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Bright's Disease and Its Treatment.—Gilbert (*Mass. Med. Jour.*, September, 1899) believes with Mills (*N. Y. Med. Jour.*, August 26, 1899) that the following facts comprise the sum total of our knowledge of the pathology of uremia: "1. Before an outbreak of uremia there is a diminution in the amount of urea excreted by the kidneys. 2. There is an increase in the percentage of urea in the blood." It is becoming more evident from day to day that the presence in the blood of uric acid and urea and in the urine of uric acid and albumin, indicate abnormal conditions that differ only in degree. In one case the faulty metabolism is indicated only by high arterial tension and evidences of proliferation of connective tissue; in the other, the inflammatory process has become pronounced. Treatment should be directed to relieving the organ of excessive work. Insoluble urates should be rendered soluble and the whole alimentary tract urged to perform its duty. Albuminous foods should be largely interdicted, and carbohydrates, milk and vegetables substituted. For the stimulation of the liver and bowels and to hasten the elimination of uric acid and urea the laxative salt of lithia, thialion, has been found efficacious. The author quotes largely from various authorities to demonstrate the good effects of this drug.

Tricuspid Regurgitation.—Huntington (*Med. Age*, April 25, 1900) says that wherever a tricuspid murmur occurs the value is impaired and produces abnormal results, that primary tricuspid regurgitation occurs jar more frequently than all other heart lesions combined, and when uncomplicated does not tend to dropsy, but the directly opposite condition. It causes an increase in force of the left ventricle, resulting in increased arterial tension, promoting renal activity and drains the system of its fluids to an abnormal degree. The lack of fluidity of the other secretions causes engorged intestinal and portal vessels resulting in constipation, impaired assimilation and malnutrition. The heart impulse is visible at the xiphoid appendix and in the fifth space. There is really a displacement to the right caused by slight strengthening of the arch of the aorta, the apex being in the normal position and the mitral valve carried to the right. Subsequent enlargement causes it to extend to the left and downward along the sixth space, and the murmur may entirely disappear. If the apex is high the murmur is mitral, if low, tricuspid. In the latter case we have venous pulsation, if the mitral also becomes involved vascular tension is lost and dropsy develops. There is no irregularity of pulse in these cases, but it is usually a trifle rapid and thready. There is usually no complaint of dyspnea, but if there is it is due to pulmonary anemia, and is relieved by lying down. The abdominal percussion resonance is generally tympanic, the epigastrium tender, and the liver enlarged. The appetite is fair, but patients as a rule lack flesh. The author has seen no evidence that tricuspid impairment results from rheumatism. It is known to be caused by lesions of the left side of the heart and of lungs, and where the cause is not apparent the author thinks whooping cough, pneumonia, la grippe, etc., in childhood sufficient to account for it. Moderate exercise is beneficial, as is the moderate use of coffee and tea. The author thinks that the pneumatic cabinet might be useful in dilated heart.

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Suprarenal Gland Extract.—An editorial in the *Medical Age* says that the rise in blood-pressnre produced by intravenous administration of the extract is due to a direct action on the substance of the coats of the arteries. Two theories are put forward to explain its action, one that it promotes the tonicity of the arteries and muscular tissne; the other that it acts as an antidote to toxic substances developed in the body. The extract is not poisonous and is not cumulative in action. It has no direct influence on the nervous system. Althongh somewhat transitory its action is exceedingly certain. Nearly all inflamed tissues are benefited by its use. It has been used in asthma, hay fever and strictures of the urethra with great success.

Rheumatism as a Diagnostic Scapegoat (editorial in *Med. News*, April 14, 1900).—Many painful conditions are treated as rheumatism which are not such. Sometimes this has no serious consequences, but at others delay is fraught with unfortunate results; for instance, when a tuberculosis of the ankle or knee-joint, or the referred pains of a tuberculosis hip-joint are treated by rubbing and passive motion instead of rest, harm always results. Flat or weak-foot and occupation neuroses in the hand and arm are liable to exacerbations in damp weather, and are the most fruitful source of error. Tonics are required in most of these, instead of depressant antirheumatics, and definite diagnosis of the exact parts affected is necessary, not only to discover the true character of the affection, but also to assure the rational therapy of the condition.

A Consideration of Acute Inflammatory Rheumatism (Neilson, *Med. News*, February 17, 1900).—Inflammatory rheumatism is a disease of the serous and fibrous tissues of the body, especially of those concerned in facilitating, limiting and producing motion, viz., synovial membranes, and the left endocardium, ligaments of joints, tendons and muscles. No serous or fibrous tissue is exempt. The disease is characterized by pain and all the cardinal points of inflammation, there is seldom pus; temperature is variable, and there is a progression from one point to another. There are various nervous symptoms, often nausea and constipation, scanty urine loaded with urates and uric acid, lactic acid in the blood and a profuse acid sweat. The lactic acid theory is untenable, as we cannot conceive of enough acid being produced by muscular exercise for the maintenance, after exposure to cold, of so protracted an attack. The author accepts the miasmatic theory on the following grounds: Micro-organisms gaining access to a suitable nidus will thrive as long as the nutrient is suitable. Their presence in the tissues provokes inflammation which will continue as long as they are active. Granted that we have organisms entering the body whose particular nidus is the serous and fibrous tissues, as soon as that nidus is exhausted they will attack other points. Their presence in the tissues produces inflammation, lactic acid, uric acid and urea, and in their growth they use up water and nitrogen. Lactic acid in the blood induces profuse perspiration. Micro-organisms have been found by numerous observers. The complications point to an infectious origin, and would be hard to explain otherwise. Just what conditions produce sus-

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ceptibility would be difficult to say. Persons who possess what is known as the arthritic diathesis, who suffer from acid dyscrasia, and whose metabolism is subject to retardation are most liable, and exposure, cold, etc., will precipitate the attack. In salicylic acid and its compounds in full doses we have an efficient means of combating the disease.

Suprarenal Therapy (Bates, *Med. News*, March 24, 1900).—The aqueous extract of the suprarenal capsule when used locally is the most powerful astringent and hemostatic known. It lessens severe inflammation of the nose and throat, giving the usual remedies a better chance to act. It is of great value in hay fever, in all inflammation of the eye and ear, in controlling hemorrhage, and in performing bloodless operations. By its action on the heart it will relieve congestion when given internally, but to a less degree than by local application. In Addison's disease and in asthma it has been successfully employed. In exophthalmic goitre it improves the action of the heart, lessens tremor, improves muscular strength, and causes disappearance of the goitre. For its use in heart diseases the author claims the following: It does not affect the normal heart or blood pressure, or the normal pulse in organic disease; an intermittent pulse becomes regular; a weak pulse becomes strong; a rapid pulse becomes slower; if anemia or hyperemia of the face or extremities exists it is relieved by the distribution of the blood being equalized; it is the most powerful stimulant known. Its action is temporary.

Aphonia and hoarseness, due to excessive action of the vocal cords or resulting from an acute cold, can be relieved with potassium bichromate in doses of 1-100 grain every hour or two.

The Injection of Serum into the Renal Vein for Uremia.—(Dr. Ligner-olles, *Echo Med.*, February, 1899.)—Three cases of uremia were treated by injecting subcutaneously serum obtained aseptically from the renal vein of a goat. The author maintains that renal blood contains all the secretory products of the organs, therefore this renal serum supplies the deficiency resulting from inactivity of the kidney. The first case was a boy 15 years, with acute scarlatinal nephritis; after one injection of 20 c.c. of serum all acute symptoms subsided. The scanty urine was increased, albumin decreased from 1.8 to ¼ per cent, and in three weeks albumin and casts entirely disappeared. The day following the injection symptoms of improvement were observed; the patient was more active and stronger, and the persistent vomiting and headache ceased. In case II uremia was due to interstitial nephritis, and there was marked cephalalgia and dyspnea and convulsion, all disappearing after six injections of from 12 to 15 c.c. of defibrinized serum. The neurotic symptoms and albuminuria also disappeared. In the third case, toxemia following chronic nephritis in a female 60 years of age, after one injection of 20 c.c. of serum the patient rapidly improved.

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Fortnightlettes

LONDON BRANCH.—W. B. Saunders & Co., medical publishers, have established a branch house in London, England, in response to the demands of their growing English business. It will be conducted ou the same high plane as that which has made the Philadelphia establishment such a phenomenal success with the American trade.

ALTHOUGH it is not within the province of a medical magazine to enter the political arena, the FORTNIGHTLY takes genuine pleasure in introducing the Democratic candidate for coroner, Dr. Robert Funkhouser, President of the St. Louis Medical Society. Dr. Funkhouser will make a faithful officer if elected, and deserves the support of all physicians, regardless of party affiliation.

INVITATIONS are out for the wedding of Dr. Herman A. Hanser to Miss Ida, daughter of Mr. and Mrs. J. Gruen, all of St. Louis, which will occur on the 24th of this month at the Lutheran Trinity Church. The doctor and his wife will be at home to their friends after November 26th at 815 N. Jefferson Avenue. The FORTNIGHTLY extends congratulations and all manner of pleasant wishes.

MARRIAGE OF MISS DIXIE LEE STERNE.—Many of our readers will be interested in the marriage of Miss Dixie Lee Sterne to Mr. Warren Jay Flick, of Wilkesbarre, Pa., which occurred at the home of the bride's parents, in Columbia, Mo., last month. For some time Mrs. Flick was in business ways closely associated with the profession, and made a host of friends who will be with us in most hearty congratulations and wishes for all manner of happiness.

MARRIED.—Dr. John Campbell Morfit and Miss Josephine Honoria Nations, were married at Kansas City, Mo., in the midst of a profusion of flowers, and a throng of friends. This is the consummation of a love which commenced at Nashville, Tenn., when Dr. Morfit was attending the meeting of the Mississippi Valley Medical Association, and Miss Nations, then a beautiful young girl from El Paso, Texas, was attending boarding school at Nashville.—*American Medical Journalist.*

DR. I. N. LOVE, editor of the *Medical Mirror*, and one of the most widely known men of medicine, has recently removed to New York City, where inducements in the form of the professorship of Internal Medicine in the Post-Graduate School, and increased opportunities in medical lines, had called him. In Dr. Love St. Louis has lost one of her staunchest and most enthusiastic advocates, and while we feel the loss deeply, we still must congratulate the doctor on the field of opportunity which now lies before him; may success attend him in it.

EXIT OF "PRACTICAL MEDICINE."—A card from the editor in the October number of *Practical Medicine* announces that a pressure of other important and extensive responsibilities causes him to bid adieu to journalistic joys and sorrows, and that hereafter *Practical Medicine* will live in memory only. We most truly regret this, Dr. Stowell has occasionally touched us up in his own inimitable style, and while we have not been able to agree with him in many points, still we have enjoyed his criticisms, and we will miss them. Dr. Stowell succeeds Mr. Rose as advertising manage of the J. C. Ayer Company.

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MEDICAL MISCELLANY

For Sale.—A lucrative Eye, Ear, Nose and Throat practice in a prosperous Western city. Rare opportunity. Address SPECIALIST, care Fortnightly Press Co., St. Louis, Mo.

The Expansion Tree.—One of the most telling ads. which we have seen is that of the Maltine Company which appears in this issue, while the idea is not entirely original, it was never used to better purpose, it tells the whole story of Maltine and its development from its original elements, of its sturdy growth from a single product to the dozen combinations which are now so popular with the profession. And the tree is still growing.

Uterine Disorders.—The value of apiol in the treatment of uterine derangements has been so clearly demonstrated that it has now secured a prominent place among the remedies generally used by the profession. It has been variously combined and prepared, but never in a form more acceptable and efficacious than the ergo-apiol (Smith) capsules. In an instructive paper (*Obstetrics*, June, 1900) Dr. W. A. Weightman, of New York, details his experience with these capsules, his statistics show that in his hands they are very nearly a specific for many forms of amenorrhea and dysmenorrhea.

Substitution as it Affects the Doctor.—Much has been written regarding the effects of substitution; however, we doubt if the physiciam has carefully considered how this evil directly affects him. For instance, if be has been in the habit of prescribing some well known and reliable remedy, from which he has derived most satisfactory results, there may possibly come a time during his experience when the preparation seems to lose its former action; when this takes place he usually attributes it to deterioration of the remedy, or the physiological condition of his patient. Yet if an investigation were made it would be found that some unscrupulous person has substituted an article which he claimed was "just as good and cheaper." It is a well known fact among the pharmaceutical trade, that as soon as certain remedies have proven their value they are immediately imitated by other manufacturers, who hope to thus gain the benefit of the reputation and effort made by the manufacturer of the legitimate article. This point has been carried so far, that certain manufacturers not only steal the ideas of the original manufacturer, but bodily take for their own use, literature pertaining to the original article and substitute the name of their own preparation in place of that of the article for which the communication was intended. This does not only show lack of originality on the part of the imitator, but it should be a warning to physicians that the goods manufactured by concerns of this kind are as unreliable and untrustworthy as their methods of doing business. We have at this time a particular case in mind. Owing to the popularity of Micajah's Medicated Uterine Wafers, which is based upon their therapeutic efficiency, a host of imitators have sprung up. These pirates not only use similar sounding names, but bodily appropriate the literature pertaining to Micajah's wafers, and insert their name in place of the original name. Caution should be exercised that in prescribing a uterine wafer, "Micajah's" should be indicated and not a substitute.

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Anemia and Its Rational Treatment.—From the standpoint of our present knowledge, there is no contesting the fact that in all forms of anemia, iron, alone, or in combination with other recognized remedies, stands without a peer. The results accruing from its use, however, are in direct ratio to the assimilability of the preparation used. The condition of the digestive organs during the administration of iron, and the consequent lack of power to utilize the remedy as ordinarily prepared, have presented a very discouraging prospect for the patient and disappointment to the physician, who finds that nearly all the chalybeate compounds can be tolerated but a short time—much shorter than is necessary for the accomplishment of the desired result, producing almost invariably loss of appetite, irritability of the stomach, obstinate constipation, headache, etc. With an experience of some time in hospital as well as private practice, during which I have been fortunately or unfortunately blessed with an unusual number of complicated and apparently uncomplicated cases of anemia, I have had the inclination and quite ample opportunity to test the various ferruginous simples and compounds as to their relative merits, and of all preparations those of the solution of pepto-manganate of iron, for their acceptability, unirritating properties and relative efficacy, held deservedly undisputed sway and preference, until the preparation "Hemaboloids" was brought to my notice. Skeptical and slow to depart from well tried, though not entirely satisfactory paths, I at least did experiment in a case that had resisted not only my efforts, but those of a number of recognized therapeutists, and obtained unusually satisfactory results. No irritation of the stomach, no anorexia, no constipation, no headache, but, on the contrary, increase of appetite, regularity of the bowels, increase in bodily weight and red blood count. The following is a record of the most obstinate case treated, which may be regarded as a fair specimen result obtained in upwards of twenty-five cases. This case was of particular interest since the patient presented an exceedingly unfavorable tubercular history, her mother being affected at the time, and two sisters having died of the malady. Treated with hemaboloids, ℥ ½, after meals and at bedtime:

1st week,	weight	157,	Hem.	57	per cent,	R.B.C.	2,900,000,	W.B.C.	8,500
2d	"	"	158,	"	60	"	"	3,200,000,	"	8,000
3d	"	"	160,	"	65	"	"	3,800,000,	"	8,000
4th	"	"	163,	"	73	"	"	4,000,000,	"	7,000
5th	"	"	162,	"	78	"	"	4,300,000,	"	6,500

Various preparations have from time to time been lauded for their effect upon the blood and the blood-making organs, and many of the old tried and new remedies have virtues of varying degree, and I have had a reasonable measure of success with all of them, but from the almost uniformly gratifying results from the use of the remedy just cited, it certainly has in my hands, and from my experience been the remedy *par excellence* and well worthy of a trial in all those obstinate forms of blood impoverishment which resist other recognized treatment. In closing, let me further remark that in the treatment of these cases the necessity and benefit of carefully selected, concentrated diet, regularity of feeding, fresh air, salt baths and last, but not least, keeping the intestinal tract in an aseptic condition, must not be lost sight of.—W. E. HOLLAND, M. D., in the *Medical Times*.

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The Medical Fortnightly.

Issued Tenth and Twenty-fifth of Every Month by the Fortnightly Press Co.

UNDER THE EDITORIAL DIRECTION OF

FRANK PARSONS NORBURY, M. D. AND THOS. A. HOPKINS, M. D.

Secretary: CHARLES WOOD FASSETT, M. D.

A COSMOPOLITAN BIWEEKLY FOR THE GENERAL PRACTITIONER

Editorial Offices in St. Louis, Chicago, Cincinnati, Jacksonville, St. Joseph, Kansas City, and Pueblo, where specimen copies may be obtained and subscriptions will be taken.

Address all business communications to the Fortnightly Press Company.

Address all contributions and books for review to the Editors, Suite 312, Century Building, Saint Louis.

Volume XVIII **NOVEMBER TENTH** **Number 9**

Editorial Department.

Physicians Who Jam the Wind.

THERE are spell-binders in medicine as well as in politics. There are wind-jammers coying with the public just as in politics. There are feeble would-be iconoclasts, glibe in tongue, voluble as a phonograph and exercising the same *mental* faculties, who berate the code, tickle their own vanity and go to sleep to dream of their own pleasing personality. These are the fellows who contemplate greatness, though she is in reality totally foreign to their kind, they go through the motions, at least, to themselves, pose before the camera in a Napoleon at St. Helena attitude, and toy with the advertising columns of the metropolitan press. The public, or rather that social level of the public, who consider themselves able to give clearness to their mental perceptions in a way that allows them green-room entrance to the smart-set, pause to read of the doings of these wind-jammers. They (the public, woefully ignorant) do not recognize these pretensions as wind-jamming, but believe them "the real thing," and lead the german for them, whilst the smart-set fall in line.

How fortunate it is that it is not given man to know really how little he knows, or as the Philistines say, "To acquire a calm, judicial mental attitude" of his own status, or "to see ourselves as others see us." These wind-jammers know more of psychology, of doubt and conviction, than they do of medicine; they can convince the unsuspecting, but they cannot touch the man who refuses to take things for granted, and wants to know the reason, who goes to the bottom, who asks the questions.

The pretenders like Weltmer, Hawley, Still, Roberts and others of their class really know better—they can divide the whole into parts—keep what they want—sell what they want, and play hide and seek with the credulous until all the free silver, solid gold and dirty greenbacks cross the board to their side. They are wind jammers with ink, spell-binders in their office practice, and all around-go-as-you-please work of the "dead easy game" for all there is in it. There is a divinity that shapes our end, however, and even Roberts, Hawley, Weltmer, Still and others will some day have to go before a guarantee company, of which St. Peter is president, to get clear titles for their mansions in the sky. F. P. N.

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Courtesy.
Journal American Medical Association.

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Dr. Christian Fenger Honored.

THE five hundred and fifty physicians who assembled in Chicago November 3d to honor Christian Fenger with a testimonial banquet, honored scientific medicine and surgery no less. It was the generous intellectual outburst of recognition to the scholar in surgery; and to the indefatigable, ceaseless and exact investigations which have given to modern inquiry that high standard of earnest work, such work as done by Dr. Fenger. We thought as we looked on that assembly, that never before was there such a scene in the history of American surgery. Never before had so many of the representative men of the great North and Central West ever been assembled. It was a magnificent sight; one inspiring to the ambitious physician, who sees scientific achievement thus rewarded, and who feels that compensation in such a form is the climax of professional attainments. This occasion will be a tribute to American medicine, which will do much toward establishing more firmly the intellectual criterion as the one true measure of a physician's greatness. Dr. Fenger is of that type of the scholar who is always a student; always enthusiastic and never contented with "well enough." American medicine has learned much from this type of scholar who seeks knowledge that he may use it for knowledge sake. The tributes to this great man, as portrayed in the toasts, were scholarly, eloquent and at times pathetic. The banquet was served in the dining-room of the Auditorium, with the following menu:

Blue Points
Consomme Celestine.
Fried Lake Trout, Sauce Ren oulade.
Tenderloin of Beef au Madere.
Spring Beans.
Peach Sherbet.
Quail on Toast.
Salad.
Cake. Fruit. Cheese.
Coffee.
Manhattan Cocktail. Sauterne Claret.
G H. Mumm's Extra Dry.
Apollinaris. Cigars.

The toastmaster was Dr. C. A. Reed, of Cincinnati, President of the American Medical Association. The speakers were:

Address and presentation of loving cup, Dr. W.W. Keen, Philadelphia.

"The Physician as a Leader of Men," Dr. Edwin F. Ricketts, Cincinnati.

"The Physician in Times of Plenty," Dr. W. H. Earles, Milwaukee, Wis.

"The Physician in Times of Adversity," Dr. J. M. Mathews, Louisville, Ky.

"The Physician as a Scientist," Dr. N. Senn, Chicago.

"The Physician as a Good Fellow," Dr. C. A. Wheaton, St. Paul, Minn.

"The Physician in Times of War," Dr. C. B. Nancrede, Ann Arbor, Mich.

"The Physician in Times of Peace," Dr. William E. Quine, Chicago.

"The Period of Awakening and the Period of Progress," Dr. Christian Fenger.

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The loving cup was presented Dr. Fenger. His photograph is etched upon one side and an inscription from the donors, "The Medical Profession" on the other. Dr. W. W. Keen, of Philadelphia, made the speech of presentation, to which Dr. Fenger happily responded.

An autograph album, the gift of Dr. Senn, and within the signatures of all the banqueters, was given Dr. Fenger. The album is luxuriously bound and beautifully decorated. The American and Danish flags entwined form its frontispiece.

Taking it all and all this was an event in American medicine worthy of historical record alongside of the "Jacobi Festschrift." F. P. N.

THE fat man who would be thin, and the thin man who would be stout, and the bald man who wishes hair are the people who make us feel that we lack much of knowing it all. The latest for obesity comes from Germany, and is vouched for by a German medical journal; like all its fellows it boasts the distinction of being *sure and speedy*. It seems a colonel in the army had become so corpulent that his body was a burden to him; in peace or war he was of use only as a massive ornament; his retirement was under consideration. Appealing to his medical officer and putting himself under his treatment he soon experienced a progressive and most gratifying emaciation, in fact he became so thin in a few weeks time that it was necessary to institute measures to regain in part that which he had so willingly lost. Today, thanks to his medical advisor, he is a general and a useful officer. The plan of treatment was simplicity itself; he was instructed to confine himself to one dish at each meal, no matter what dish was selected, fish, flesh or vegetables; that and that alone was to constitute the diet of that meal; of that he was allowed all that his appetite craved without reserve, but soups, condiments and supplementary dishes were entirely cut off. To avoid monotony it was possible to vary the dishes over a wide range from meal to meal. The idea seems rational; it is certainly a fact that the appetite is much more quickly satisfied if given short range, it would be difficult to over-eat were it not that variety stimulates the appetite to an overloading of the stomach. The plan does not deprive the patient of the pleasure of living, and is free from all the objections which may be made to the starvation methods. It is so simple that it may be readily tried, if the American system is not materially different from the German it should be an entire success. T. A. H.

Obesity.

BRYSON–CAMPBELL.—On Tuesday afternoon, October 30th, Dr. Given Campbell and Miss Sarah Winter Bryson were married at the home of the bride's parents, Dr. and Mrs. Jas. P. Bryson. After a bridal tour through the South, Dr. and Mrs. Campbell will return to St. Louis. They will be at home to their friends after December 1st, at 3429 Morgan street.

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A Wise Move in Public Health Prevention.

THE Illinois State Board of Health has recently issued pamphlets for general distribution, descriptive of scarlet fever and one on diphtheria. It is the purpose of these pamphlets to instruct the public on the nature and care of these diseases, that prevention, suppression, proper isolation and intelligent treatment may be had. The public needs just such general instruction, and it is every physician's duty to aid in disseminating this information. Copies of these pamphlets in any desired quantity without cost, can be obtained by the physicians of Illinois, by addressing the Secretary of the State Board of Health at Springfield.

TRUE AMERICAN SPIRIT.

NEW YORK, November 1, 1900.

FORTNIGHTLY PRESS CO., St. Louis, Mo.:

Our building was totally destroyed by fire on last Monday afternoon, and we are at a loss to know if our contract has or is about expired. Continue along our ad. With true American spirit we will be on our feet in about ten days. The market is supplied with Gude's pepto-mangan. In that respect there will be no interference with business.

Respectfully yours,

M. J. BREITENBACH CO.

MATRIMONIAL.—Dr. J. Ellis Jennings, of this city, and Miss Margaret Musser, daughter of Mrs. Wm. Musser, of Muncy, Pa., were married at St. James Church, Muncy, on October 25th. Dr. and Mrs. Jennings are making an extensive Mediterranean trip. They will return to St. Louis early in February, 1901, and will be at home to their friends after the 15th of that month. The FORTNIGHTLY observes the epidemic of matrimony among the St. Louis profession with entire approval; we are confident that it is a condition "devoutly to be hoped for." Here's congratulations to Dr. and Mrs. Jennings.

THE ROENTGEN SOCIETY OF THE UNITED STATES.—The first regular meeting of this society, the object of which is, as its name implies, "the advancement of the knowledge of practical X-ray work and allied arts and sciences," will be held at the Academy of Medicine in New York City on December 13 and 14, 1900. The following are the officers of the society: President, Dr. Heber Robarts, St. Louis, Mo.; First Vice-President, Dr. J. P. Girdwood, Montreal, Canada; Second Vice-President, Dr. H. P. Bender, Brooklyn, N.Y.; Secretary and Treasurer, Dr. J. Rudis-Jicinsky, Cedar Rapids, Iowa; Assistant Secretary, Dr. Carl Beck, 37 E. 31st street, New York. The secretaries of all scientific, medical, surgical, dental, electrotherapeutical, and all auxillary societies, wishing to be represented are requested to send in the names of their delegates on or before the meeting in December. All those wishing to become members or to read a paper before the society may communicate with the secretary.

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The Reviewer's Table.

Books, Reprints, and Instruments for this department, should be sent to the Editors, St. Louis

THIS (second) edition of Taylor's work is a pronounced improvement over the first. It has been amplified and re-written in many respects; chapters on vaginismus, masturbation in women, and kraurosis vulvæ have been added; and matters relating to the much-discussed topic of enlargement of the penile dorsal veins and its relation to impotence, has been introduced. But it must be said that not much is given on the subject, which is left in the very dubious attitude of *sub judice*. Probably the most valuable and interesting feature of the work are the numerous illustrations, many of them very rare and unusual conditions, that are thus stamped in the practitioner's memory to better effect. While the subject of organic impotence is quite comprehensively handled, the same cannot be said of the psychic, symptomatic and atonic forms of the affection, especially in relation to the discussion of their treatment. Many modes and suggestions, submitted in the last few years, are not mentioned; certain apparatuses that are claimed to facilitate intercourse in such conditions, are not discussed, either with or without approval, so that the book, in this respect, is unsatisfactory. B. L.

A PRACTICAL TREATISE ON SEXUAL DISORDERS IN THE MALE AND FEMALE. By ROBERT W. TAYLOR, A.M., M.D., Clinical Professor of Venereal Diseases, College of Physicians and Surgeons, New York. New (2d) edition enlarged and thoroughly revised. In one octavo volume of 435 pages, with 91 engravings and 13 colored plates. Cloth, $3 00, net. Philadelphia: LEA BROTHERS & CO. 1900.

THE new (6th) American edition of "Nettleship on the Eye," by Dr. W. C. Posey, of Philadelphia, is a great improvement over former editions, and is certain to increase its popularity. The accomplished editor has revised it thoroughly to date, adapting it particularly to the needs of American practitioners. Much new material has been added as well as many fine illustrations. Altogether it is a wonderfully compact and practical manual on the eye, serviceable for every student, practitioner and specialist. J. E. J.

DISEASES OF THE EYE. By EDWARD NETTLESHIP, F.R.C.S., Ophthalmic Surgeon at St. Thomas' Hospital, London; Surgeon to the Royal London Ophthalmic Hospital, etc. New (6th) American from the sixth English edition, thoroughly revised by WILLIAM CAMPBELL POSEY, M. D. With a Supplement on the detection of color blindness by WILLIAM THOMSON, M. D., Professor of Ophthalmology in the Jefferson Medical College, Philadelphia. Just ready. In one 12mo. volume of 562 pages, with 102 illustrations. Selections from Snellen's test-types and formulæ and 5 colored plates. Cloth, $2.25, net. Philadelphia and New York: LEA BROTHERS & CO.

A YEAR OF ROMANCE.—With its November issue, *The Century Magazine* begins a year of romance, during which many of the most famous living writers of fiction will contribute to the magazine short stories, novels, or novelettes. The reception accorded "The Helmet of Navarre," begun in the August number, indicates that the proposed departure will be a popular one, and with such names to conjure with as Rudyard Kipling, Mrs. Burnett, Bret Harte, Lew Wallace, Weir Mitchell, Miss Wilkins, Winston Churchill, Howells, James, Harris, Cable, Stockton, Page, Anstey and Ian Maclaren—to note but these few—the conductors of *The Century* are pretty sure to meet the tastes of all lovers of fiction.

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MEDICAL DIAGNOSIS, WITH SPECIAL REFERENCE TO PRACTICAL MEDICINE.—By J. M. DaCosta, M. D., L. L. D., Ninth Edition. Illustrated. Philadelphia, J. B. Lippincott & Co., 1900.

DACOSTA ON DIAGNOSIS is a medical classic, which throughout its numerous editions has maintained its first place among the leading works on Diagnosis. This is due, first, to the position which the author held in the medical world as a student, practitioner and teacher; second, to the indefatigable energy put forth in constantly revising the work, so that each edition has represented the very best and reliable information existing on medical diagnosis; third, to the elegance of style and composition, clear in its diction and inviting even to the casual reader, and holding with increasing attention the book-lover and student as he reads its classic pages. Now, that its distinguished author is dead, having died ere this superb edition was on the shelves of the book-seller, we feel that this edition should be appreciated more, perhaps, than all others by the medical profession of this country, and especially by those who in the past have listened to his thorough instruction, and heard from his lips in English as pure and elegant as ever spoken by man, the principles of medicine now revised for the last time by this giant in intellect, this cavalier of the sick-room, this friend and counsellor of the student, this great physician. DaCosta on Diagnosis is an American classic, and as such will always have a place in American medical literature. F. P. N.

MANUAL OF PATHOLOGY, INCLUDING BACTERIOLOGY, THE TECHNIQUE OF POST-MORTEM AND METHODS OF PATHOLOGICAL RESEARCH.—W. M. Tate Coplin, M. D., Professor of Pathology and Bacteriology, Jefferson Medical College, Philadelphia, etc. Third Edition, Revised and enlarged. 330 Illustrations, 7 colored plates. Philadelphia; P. Blakiston's Sons & Co., 1900.

THIS is really a new book, inasmuch as its author has since the appearance of the second edition, almost completely rewritten and enlarged the text of the original. We have carefully reviewed this excellent work, looking at it from the standpoint of the student, for whom it was written, and we conclude that the author has well discharged his duty. The illustrations are especially serviceable, appropriate in elucidating the text. Again, the colored plates, while few, are of great assistance to the student. The text is concise and clear, and the descriptions of technic free from confusion, so that the student can successfully carry out special technic from directions here given. The book takes up general pathology, considering hypertrophy, infiltration and degeneration, necrosis, circulatory disturbances, inflammation, tumors, etc., etc., while under special pathology are considered, blood with technic of examination, spleen, lymph glands, thymus body, vascular system, membranes, organs of respiration, alimentary canal, urinary organs, liver, pancreas, ductless glands, muscles, bones and joints and nervous system. Taking the work as a whole it fully completes the original designs of the author, viz., not a treatise or a book of reference, but, as its title indicates, a manual that the author hopes may be useful in the laboratory and post-mortem room and in clinical diagnosis by the aid of the microscope, The publishers' work is superb, the text clear, illustrations and the binding first-class.

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THIS is the style of manual which should be in the hands of all medical students and nurses. To some the careful detail of the author may sound pedantic, but to the physician seeking knowledge this detail is essential and worthy of much consideration. There would be more success in obstetric technic; more comfort to mother; more chances for life for the child and greater honor for the physician and nurse, if we had more care of little things, the minor details of obstetrics. This book covers "the pennies" of practical obstetrics, out of which "grow the dollars" in results. We commend it to young physicians as a guide, and to the nurse as her counselor in obstetric nursing.

A MANUAL OF OBSTETRICAL TECHNIQUE AS APPLIED TO PRIVATE PRACTICE; with a Chapter on Abortion, Premature Labor and Curettage.—By Joseph Brown Cooke, M. D., New York, Late Attending Physician St. Mary's Free Hospital for Children, Out-Door Department; Late Attending Physician Northwestern Dispensary, Department of Diseases of Children; etc. Philadelphia and London. J. B. Lippincott Company. 1900.

THIS excellent treatise on practical hygiene is one of the books which should be in the hands of all public health and municipal officers having in hand the framing of laws destined to affect the public welfare. The value of public health is inestimable, hence, the duty of its preservation, and in this practical age when science has in a great measure conquered superstition, the results of public hygiene speak for themselves. Abbott first deals with the causation of disease, then modes of dissemination and prevention of special diseases, such as typhoid fever, amebic dysentery, tuberculosis, pneumonia, diphtheria, etc., etc. Suppurative, septic, venereal, etc., receive attention, also leprosy, hydrophobia, etc. General prophylaxis is considered from the standpoint of the clinician. The book is not large, but is yet complete and very much to the point. F. P. N.

HYGIENE OF TRANSMISSIBLE DISEASES.—By A. C. Abbott, M. D. Price $2.00. Philadelphia; W. B. Saunders. 1900.

THE primary purpose of the volume is to present gynecology in a form suited to the needs of the class-room, where theory counts for less than fact, and where facts themselves need to be concisely and clearly stated, it is admirably suited for this purpose and for the needs of the general practitioner as well. The subject-matter is naturally largely operative; anatomy, physiology and pathology in detail are introduced only where necessary to a full understanding of the text; their introduction would have necessitated a much larger volume, and would have been confusing to the student, who will naturally refer to general text-books on these subjects in connection with his reading. In selection and putting of the text, in illustration and in arrangement the volume recommends itself to the profession, the work of the publisher is also excellent, and the book sure of continued popularity. H.

A TEXT BOOK OF DISEASES OF WOMEN By Chas. B. Penrose, M. D., Ph. D., Professor of Gynecology in the University, etc Third Edition; Revised and enlarged; Illustrated; 531 pages, bound in cloth. Price $3.75 net. W. B. Saunders & Co., Philadelphia, 1900.

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Original Department.

PAPERS for the Original Department should be in hand one month in advance, and contributed to THE MEDICAL FORTNIGHTLY exclusively. A liberal number of extra copies will be furnished authors, and reprints may be obtained at reasonable rates, if request accompanies the manuscript. Engravings from photographs furnished free.

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Reflex Neurosis from Disturbed Pelvic Mechanism—Its Treatment.

BY BYRON ROBINSON, B. S., M. D.,

CHICAGO.

A PECULIAR explanation of sterility in dysmenorrheal neurotic women is offered in the mechanic theory of dysmenorrhea. It is false, however, for sterility in such patients is due to myometritis. If conception did occur its rigid walls would not expand, and the ovum would become prematurely expelled. Hence in general, flexion or mechanical obstruction of the uterine canal does not create dysmenorrhea nor sterility —both rest on myometritis.

Acute distention of the uterine vessels during the premenstrual phase is one of the main causes of dysmenorrhea. Another main cause is uterine contraction due to congestions. It is plain that irregular muscular contracions create pain in themselves, but especially is this the case when the contractions occur in inflamed muscle. An example may be given of this; primipara generally do not suffer from "after pains." The healthy uterine contractions drive out the clots and placental debris chiefly without pain. The muscular contractions are performed by healthy muscles. Multipara suffer considerable from "after pain," because they are generally afflicted with myometritis due to infection from the puerperium. Hence the painful condition is due to contraction of a myometritic uterus. We know positively that many uteri accompanied by painful menstruation are inflamed, myometritic, also that uterine contractions occur during menstruation.

Hence, simple dysmenorrhea rests on myometritis, in which two factors arise, viz., acute distension of uterine vessels, traumatizing nerve reflexes and uterine contraction, causing uterine colic.

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Dysmenorrhea is a disease which generally arises shortly after puberty, and is usually a consequence of non-development and myometritis. Hence physicians think of obstruction or stenosis. Also more secretions exist in the cavum uteri in acute anteflexion than in extension. A uterus acutely fixed, and fixed persistently in such position for years will be narrowed by endometritis more than an extended uterus. The physician is often deceived in the size or stenosis of the cervical canal by inability to introduce the sound from deviating condition of the cervical canal. However, bimanual examination is now perfectly capable of making a diagnosis without the dangerous sound. Sterility frequently depends on dislocation of the genitals just as does dysmenorrhea. Morbid symptoms frequently arise in different portions of the body as a result of dislocation of the genitals. Disturbance in the pelvic nerves is chiefly due to pressure from inflammatory processes. Reflex action accompany dislocated genitals extremely frequent. The proof of such reflexes is that they disappear after the recovery of the genital disease. If by treatment the dislocation of the genital recovers, and the distant reflexes disappear after years of standing, it shows some cause and relation. The frequent stomach troubles, lumbo-sacral pains, unilateral and local headaches are common reflexes from genital dislocation. The nervous symptoms arising from dislocated genitals, are very numerous and varied, but require uninterrupted leisure and study to comprehend. The general surgeon will study the excessively mobile kidney, and announce that it produces gastric disturbances, and eventually neurasthenia, and hence requires nephropexy.

But since he will not devote the long required time necessary to comprehend the reflexes and neuroses from dislocated genitals, he, with the neurologist, whose opportunities for genital study is about the same, will announce neuroses from the dislocated female is all bosh—a nerve pigment in the over-strained gynecologic brain.

Sufficient study and experience will induce the general practitioner and surgeon, as well as the neurologist, to recognize the legitimate field of reflexes and consequent neuroses from the female pelvic organs. Rational gynecologic treatment relieves more or less these numerous reflexes and neuroses.

The gynecologist is broad enough to combat hereditary dispositions defective education, psychosis, ill-nourishment, bad hygiene and false living—in short, the gynecologist is fully capable of correctlng general ills sufficiently to aid him in his local treatment. System is beginning to dawn out of the chaos, and neuroses are becoming analyzed as to their rock and base.

Finally, it is not an easy matter to analyze the symptoms of genital dislocations, as they are always complicated. A diagnosis of genital dislocation does not depend on certain symptoms, but on bimanual palpation, which determines the position, size, consistence, mobility and condition of the pelvic viscera.

The sound is a useless and dangerous instrument in diagnosing genital disease. The rectal route is rarely required. Anesthesia is scarcely never demanded in bimanual palpation.

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The speculum is an instrument for operative purposes, not for diagnosis.

Many of these inflammatory processes, with the exception of myometritis and inflammation in the sacro-uterine ligaments, yield rapidly to local treatment. When the utero-sacral ligaments become once the established seat of inflammation, it forces the uterus fundus into a fixed anteflexion by contraction, and it is not easily cured.

If the myometritis be cured, or even comfortably relieved, the dysmenorrhea is relieved, although the uterus retains its previous form and shape, but it is soft and not hard. A woman may suffer from dysmenorrhea with either an extended or flexed uterus—both are pathologic and pain rests on the myometritis.

Any uterus which is the seat of an inflammatory process is liable to dysmenorrhea from congestion and distention of vessels and consequent peripheral nerve trauma. As a general rule the dysmenorrhea with all its nervous accompaniments, improves as the myometritis improves. As the rigid, stiffened uterus softens and the flexions yield, the dysmenorrhea lessens in severity.

Flexions and extensions of the uterus may occur, but dysmenorrhea will be ruled exactly in accordance with the softness of the uterus. In a considerable experience among general practitioners I find, as B. Schultze notes, a widespread belief that dysmenorrhea is due to the pathologic anteflexion. Doubtless the remarkable Simms was the author of the dogma, as he advocated a so-called mechanical dysmenorrhea. It is dogma, because it has insufficient grounds for belief, and also dogma because beyond the reach of argument. It is probable, as Schultze remarks, that physicians believe in mechanical dysmenorrhea because the pains assume a similar appearance to labor pains. The woman is apt to say, that "if the discharge would only escape I would be relieved" of the pelvic pain. But this is just as unreasonable as it would be for a woman to say that she had tenseness of the bladder, and yet her bladder had no urine in it. If bladder tenseness be relieved by a catheter why not relieve dysmenorrhea by a sound? However, a sound introduced into the dysmenorrheic uterus when it is in its most violent pains, will reveal no fluid blood in its cavity; hence, dysmenorrhea does not arise from mechanical obstruction, but from myometritis, trauma of nerve periphery. Sounding, dilating forcibly, reposition, curetting, and even intrauterine electricity generally exacerbates, especially if it be a nullipara, the misery of the dysmenorrhea, myometritis, and the patient becomes more and more a neurotic. The treatment must be such as restores the normal circulation, softens the rigid, hard uterus, dissolves the peritoneal exudates and cellulitis. The compromised circulation and traumatized nerve periphery, must be relieved. Boroglycerine tampons and hot vaginal douches, five to thirty quarts twice daily is the sovereign remedy for treatment of dysmenorrhea short of operative interference. Dilatation, especially of a nulliparous uterus, makes thousands of atria for infection.

It is manifest to all observers that the relation of the nervous system to the genitals is intimate and profound, and that the relation of menstrua

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tion to the nervous system is very evident. The subject afflicted with dysmenorrhea is not only seriously ill in the menstrual period, but she is in general a neurotic. The irritation of the diseased genitals puts the whole nervous system out of tune. There must be a basic reason for this, in the fact that a partially developed uterus, or a uterus which has been checked in its growth by an inflammatory process, disturbs the whole nervous system.

Congestion can cause pain and does cause pain in myometritis.

Dysmenorrhea reaches its highest and most violent intensity in the premenstrual phase, during the most tense congestion, when the subject becomes the most neurotic. The pain lessens in the intra-menstrual phase, because the tense congestion is relieved, not because of relief of mechanical obstruction. The profound relation of the genitals to the other viscera is observed in the numerous cases of bloating at the menstrual period (which means indigestion, excessive, deficient or disproportionate secretion of the tractus; intestinalis arises and consequent fermentation).

The oviducts are so highly supplied with nerves that the original colic which frequently arises in inflammatory processes, the pain prostrates the subject. Dysmenorrhea has such vigorous influence over the nervous system, that it has been called irritability of the nervous system, an irritability which is thought by some to be a nerve habit occurring monthly. It is also called nervous dysmenorrhea. It is simply widely spread impression that the genitals rule the general nervous system with a high hand.

It is true that patients suffering with severe dysmenorrhea also suffer from anemia and chlorosis, but that is due to the long debilitating effect of the myometritis, the reflex effect of the genital irritation on the remainder of the nervous system.

For the typical subject of dysmenorrhea with the typical accompanying neurosis, perhaps we should look to a deficiently developed genital system, especially a deficiently developed uterus. The ovaries are the essential sexual organ, and hence are liable to be well developed, as liable as is the brain.

The girl that begins to menstruate late is the girl who suffers from dysmenorrhea, from neurosis. Her uterus was either not fully developed, or its growth was checked by an attack of myometritis. The same subject who begins to menstruate late will have the menopause early. The partially developed genitals, or the genitals checked in growth have not the constitutional power to long persist in function, and hence, sometimes before 40, prematurely the menopause occurs.

GEORGE H. FOX classifies baths according to temperature as follows: Hot over 98 degrees F.; warm, between 90 degrees and 98 degrees; tepid, between 80 degrees and 90 degrees; cool, between 65 degrees and 80 degrees; and cold, below 62 degrees.

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A Study of the Senses of the Feeble-Minded.

By A. R. T. Wylie, Ph. D,
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MAN comes to the study of himself last. This is true both of the race and the individual. Anthropology has had considerable to tell us of ancient man, but it is only recently that we have been giving due attention to present man. This is due in part to the growth of criminal anthropology and psychology. The application, in recent years, of experimental methods to psychology has restated many of the old problems and created many new ones, hence its phenomenal growth. However, normal psychology must attain a certain growth before that most fruitful field of abnormal mind can be attacked, and it is only in recent years that we find serious attempts in this direction.

The chief difficulty in the way of psycho-pathology, is the undeveloped condition of psychology. It cannot tell us with sufficient accuracy what the normal mind is, and until it can psycho-pathology will be delayed. However, the investigations in individual psychology are steps in this direction, and all work on abnormal mind will prove an efficient stimulus to this end.

The importance of the psychological investigation of the feeble-minded is evident from a wider outlook. This is not true so much of the lower grades or idiotic, who are extra-social, as of the higher grades who are distinctly anti-social. These latter are intimately connected with many of the sociological and criminological questions of the day, as vagabondage, hereditary crime, prostitution, truancy, etc., and the consequent questions of punishment and legal control. The solution of these questions depends, in part, on thorough psychological investigation.

The methods to be employed can be divided into two classes, the objective and the subjective. The most exact are the objective, but they are of limited use. They consist chiefly in making use of various reflexes, the most important of which are, the pulse, respiration, iris and bladder.* In the subjective methods the child tells what he sees, feels or hears. The value of such evidence depends, of course, on the mental ability of the child. He may not understand, he may imagine that he feels something when he does not, he may agree to whatever he thinks you wish him to, or in a spirit of bravado he may resist any impression that you may wish to create. Hence there are a great many variations and irregularities in the results. But these irregularities are a part of the subject, in fact they are one of the chief characteristics of the imbecile. We must not be discouraged by the difficulties in the way, but must find out what the imbecile is and does, not what an ideal one might be. Consequently our subjective methods must be more or less objective. The investigator must be the judge of the value of the evidence, after becoming thoroughly acquainted with his subject, he must educate him in the tests which he wishes him to

*See Tuke's D.ct. of Psych. Med.

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perform, and then throw out all that are not fairly representative. The average error will be higher than in normal psychology, but the nature of the material necessitates it.

The sense being the basis of mental life, the first investigations were made concerning them.

TOUCH.—Observers are agreed that touch is imperfect or obtuse among the feeble-minded.† However, it is a subject very difficult to get at, especially among the lower grades on account of their mental dullness and lack of attention. Lombroso finds a dullness of touch among the criminal and insane.‡ In order to investigate the sensibility of touch among the higher grades of feeble-minded children, the author made use of Scripture's Touch Weights, the common compass ethesiometer not being applicable. There were twenty of these weights ranging from one to twenty milligrams. The back of the hand was the point selected for testing. The method of work was to begin with the smallest weight and find one whose weight was just perceptible. There were thirty-two boys and thirty-seven girls tested. The results were :

	Left Hand.	Mean Variation.	Right Hand.	Mean Variation.
Boys.....	3.7	3.4	3.5	2.8
Girls.....	2.3	1.9	2.3	2.6

The normal according to Scripture is 2.0. This shows touch to be considerably dulled among the feeble-minded, especially among the boys. The high mean variation is very noticeable, and is characteristic of the feeble-minded. Dividing the girls and boys into three groups according to their mental ability, as estimated by their teacher, A being the highest, we have :

	Left Hand.	Mean Variation.	Right Hand.	Mean Variation.
Boys A	3.5	3.8	4.3	3.8
" B.....	2.0	1.5	1.5	0.8
" C	7.3	6.6	6.8	5.9
Girls A	2.6	1.9	2.3	1.8
" B.....	1.4	0.7	1.8	1.2
" C	2.9	3.5	2.9	3.5

This further indicates that the fineness of touch depends on mental ability. This is more evident when we consider the fact that there were a number whose touch threshold did not lie within the range of weights. Of these there were four boys graded C, and eight girls graded, one A, one B, and six C. Three boys graded C and one graded B were unable to perform the test, also four girls graded C and one graded B.

Among those tested there were six Mongols. These all showed a remarkable dullness. Four of them did not come within the range of the weights, and the other two gave readings of eighteen and twenty.

PAIN.—That a large number of the lower grades of feeble-minded children lack in some degree the sense of pain, is a fact of frequent observ-

†Ireland: Mental Affections of Children, p. 303. Sollier: Psych. de l' Idiot et de l' Imbecile, p. 54.
‡L Homme Criminel, Vol. I, p. 325.

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ation.§ They beat themselves, pound their heads against the walls and floors, pick holes in themselves, bite themselves even to making great ulcers, and pull out their hair with no seeming discomfort. One girl when angry will scald herself severely. However, the total loss of pain is not thought to be so common as among the insane.‖

For the purpose of investigating the pain sense of the feeble-minded, the author made use of Cattel's Algometer. This consists of a spring dynamometer, by means of which given pressure can be exerted on any surface. "Attached to the lower end of the spring is a cylindrical piece of brass. This is capped with hard rubber, which is applied to the surface to be stimulated. The cap which comes in contact with the skin is hemispherical and about eight millimeters in diameter. The pressure is exerted by the hand of the experimenter, and the amount of pressure is indicated in killograms." The stimulus was applied to the volar surface of each hand over the fifth metacarpal, and to the forehead about two centimeters above the nasal. The pressure was increased at the rate of two killograms per second. Each child was given five trials, seven days apart, during the summer of 1899. Taking the children's reaction time at 0.338 sec.,* and the normal time at 0.150 sec., the results were reduced one killogram. The mean variation was calculated for each person and then averaged. The results were as follows:

FEEBLE-MINDED CHILDREN.	Left Hand.	Mean Variation.	Right Hand.	Mean Variation.	Fore-h ad.	Mean Variation.
37 boys.....	5.7	0.96	5.7	0.95	2.8	0.67
38 girls.....	3.0	0.75	3.2	0.78	1.4	0.56
NORMAL PEOPLE.						
Griffing† 128 students, men	5.7	....	..	....	3.3	0.008
98 students, women.	3.6	....	..	....	1.3	0.008
McDonald‡ 142 men.....	6.89	....	7.13	....	..	....
" 46 women...	5.06	....	5.01	....	..	....
" 20 profess'l men.	3.26	....	3.72	....	..	....
" 27 women, non-laboring.....	3.38	....	3'45	....	..	....
" 9 slum men....	13.27	....	13.61	....	..	....
" 34 men, Boston unemployed ..	9.81	....	9.77	....	..	....
" 9 women, Paris 'Maison de tolérance'.....	9.36	....	9.00	....	..	....

Comparing our results with those of Griffing, we find that our children are more sensitive in their hands than normal people. The forehead probably gives more exact results, as the structural conditions are more constant, here the boys are much less sensitive, the girls being about normal. The results of McDonald, although obtained with the same instrument, are

§ Ireland: Op. Cit., p. 404. Sollier: Op. Cit., p. 54.
‖ Ireland: Op. Cit.
* Jour. of Psycho-Asthenics, March, 1900.
† See Psych. Rev. Monographs, No. 1.
‡ Report Commissioner of Education, 1897-98, Vol. I, p. 1162.

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in some respects higher, showing, as he contends, that sensitiveness to pain depends on sociological condition. Granting this the pain sense of our children would not be obtuse. Our results show the girls to be more sensitive than the boys, and that both are more sensitive in their left hands, in these respects agreeing with normal people.§

Grouping the children into groups according to mental ability, A being brightest, we have:

	Left Hand.	M. V.	Right Hand.	M. V.	Forehead.	M. V.
Boys, A...	4.4	1.02	4.9	1.18	1.8	0.56
" B...	6.5	0.86	6.2	0.91	3.4	0,76
" C..	5.4	1.08	5.5	0.92	2.8	0.66
Girls, A...	3.3	0.87	3.5	0.73	1.5	0.54
" B...	2.8	0.58	3.0	0.76	1.4	0.59
" C...	2.0	0.79	3.1	0.87	1.6	0.87

The brighter boys have a greater sensitiveness for pain than the duller boys. With the girls such is not the indication except, perhaps, on the forehead. Thickness of hands lessened the sensibility for pain, thinness of hands increased it.

Pain on the forehead continued after the stimulus ceased with twenty-two boys in 33.5 per cent of trials, and twenty-seven girls in 37.7 per cent of trials. With the greater number of the children this occurred only one or two times.

Five boys, or 12 per cent of those examined, gave from one to five tests above the reading of the instrument (13 kg.). With one boy this was always the case. The readings taken showed the boys less sensitive than the average. Two girls, or five per cent of those examined, gave readings above the range of the instrument.

The ages of the children ranged from fourteen to twenty-five years. The sensibility to pain was not observed to depend on their age.

Griffing* concludes that variations in sensitiveness to pain is due to "constitutional nervous difference," and to thickness of the skin, propositions to which we agree. Gilbert† finds that sensitiveness decreases with age up to nineteen years among normal children, and that their mean variation is high. Carman‡ finds that dull children are less sensitive to pain than bright ones, and those dull in mathematics are more sensitive on the right side. With this last statement our results do not agree.

MUSCLE SENSE.—Among the lower grades of feeble-minded children, we find those among whom the muscle sense seems to be absent, they lie or sit still all day, and never move unless forced to by some outward circumstances. Among those of higher grade, it is lacking, as shown by difficulty in walking and moving themselves. This deficiency can exist without marked deficiency in the other senses. Children have been known who could not dress themselves, but could learn to read and write.

§ University of Iowa Studies in Psych., Vol. I, p. 11.
*Op. Cit., p. 15. †Op. Cit., p. 11.
‡ Amer. Jour. of Psych., April, 1899, p. 138.
§ See Voisin: Sur L'Idiotie, p. 138.

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With others this sense may be excessively developed, as shown by a continual movement and a desire never to be at rest. Here we meet with the tics and various automatic movements of feeble-minded children.§ Fully fifty per cent of low grade children have some such movements.

In order to test the muscle sense of our school children, the writer made use of a series of weights, all of the same size, ranging from one hundred to one hundred and thirty grams in steps of three grams. The child was required to lift each weight by thumb and fore-finger, in this way comparing the one weighing one hundred grams with each of the other, and then to state which one seemed the heavier. Each test was repeated in an inverse order.

Twenty-three boys and twenty-nine girls were tested. Among the boys, three were unable to do the test, and four, or twenty per cent, could detect no difference in the series. Two per cent would be a fair estimate for normal children.

The only figures we have for normal children are those given by Gilbert for Iowa school children. However, he used weights ranging from eighty-two to one hundred grams. Comparing our results with his, we find that our boys have an average of 2.7 grams higher. Grouping our boys according to mental ability, we have the following averages as the least perceptible difference in grams.

A.....	7.7	2.9
B.....	9.2	3.0
C.....	8.3	4.5

This shows a finer perception with least variation on the part of the brighter boys.

Of the twenty-nine girls examined, seventeen, or 58.6 per cent could perceive no difference within the limit of the series. The twelve remaining girls gave an average only 0.5 higher than Gilbert's figures for normal girls. Grouping them according to mental ability we have:

A.....	5.7	2.2
B.....	7.1	4.6
C.....	9.8	3.7

This also shows a finer perception on the part of the brighter girls. Those who could see no difference within the limit of the series, were thus grouped, A two, B eight, C seven.

Thus we find a dullness of the muscle sense among the feeble-minded, varying inversely as the mental ability.

HEARING.—Observers have not had much to tell us of the hearing of the feeble-minded. Deafness, however, is thought to be less prevalent than among normal children.

Our tests consisted in finding the highest and lowest tone which could be perceived and the least perceptible difference of tone. Sixteen boys and twenty-one girls of larger singing class were examined. For finding the highest perceptible tone, Galton's Whistle was used. For the boys this

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consisted of 53,000 vibrations, with a maximum of 104,000 and a minimum of 29,600. For the girls the average was 63,000, with a maximum of 125,500, and a minimum of 25,500. The average for normal people is usually given at 50,000. For finding the lowest tone Appun's Reed was used. For the boys this was found to be a tone of 18 vibrations, with a maximum of 22 and a minimum of 14; and for the girls it was 18 with a maximum of 30 and a minimum of 13. A tone of 16 vibrations is usually given as the lowest perceptible to the ears of normal people. In order to find the least perceptible difference of tone a tone tester was used. This consists of a reed whose length can be adjusted so as to give the various tones of an octave. The tone A, 435 vibrations, being given, we then proceeded to find what difference of tone above and below this the child could distinguish. For the boys this was $\frac{7}{16}$ tone, with a mean variation of $\frac{2}{16}$; for the girls it was $\frac{9}{16}$ with a mean variation of $\frac{2}{16}$.

Our experiments show nothing abnormal in respect to hearing, however, they were performed on our brightest children.

VISION.—The visual apparatus of idiots is generally good.* However, seven or eight per cent have been found blind from their first year. Strabismus is frequently found, and nystagmus and squinting are common. Abnormalities of the iris and pigmentary retinitis are also found. Schleich finds hypermetropia very common among idiots and imbeciles.†

The common means of testing vision by means of a Snellen test chart is only of limited use among the feeble-minded, being of course limited to those who can read. However, twenty-five boys and nineteen girls were tested with it. Of these only three boys or seven per cent of all had normal vision in both eyes. Nine per cent of the children had vision of $\frac{6}{6}$, and the remaining eighty-four per cent had vision ranging from $\frac{6}{12}$ to $\frac{3}{60}$. Dr. West found forty-one per cent of the children in the schools of Worcester, Mass., with defective vision. Eighty-four per cent of the children were astigmatic.

This test being controlled by errors of refraction and being of limited use, we sought another. To this end we made use of a color wheel, on which was mounted a piece of red paper in the usual manner, so that any amount of white could be mixed with it. The various shades thus produced were compared with a piece of the original red paper. Beginning with no white on the wheel, white was gradually introduced until a difference was noted, then gradually reduced until no difference was indicated. The mean of these readings was taken and the variation noted.

For thirty boys the average was thirty-two degrees, with a mean variation of nine degrees; for twenty-three girls the average was twenty-three degrees with a mean variation of seven degrees. According to the investigations made to establish the validity of Fechner's law, the normal would be 3.6 degrees. Consequently we have a visual dullness on the part of the feeble-minded, it being six to eight times that of normal people.

*Ireland: Op. Cit. †Volsin: Op. Cit., p. 126.

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Grouping the children according to mental ability we have:

	Boys.	Girls.
A.....	16.4 ± 5.8	15.6 ± 4.5
B.....	29.6 ± 11.2	14.8 ± 5.6
C.....	50.7 ± 8.3	40.0 ± 10.7

Eight boys and five girls, who were unable to perform the test, were graded C.

Thus we conclude that there is a dullness of the visual sense among the feeble-minded.

Voisin says that the visual field is almost always modified among the feeble-minded.* Born criminals have been found to have visual fields remarkably limited in extent, particularly in the upper and inner halves, and with very irregular boundary lines. Those whose visual fields are limited also show deficiencies in their other senses.†

Having mapped the visual fields of fourteen feeble-minded children, they were all found limited, most of them to a remarkable extent. One boy and one girl had central vision only. The fields were limited to the greatest extent in the upper and inner halves and to a slight extent in the outer halves. The fields were as a rule symmetrical, one being limited more than the other.

This was particularly true of the paralytics. The boundary lines were as a rule irregular. There was also a variability in extent noticed, which has also been found among the criminal class.

When we remember the origin of the eye, how it began as a bud from the anterior cerebral vesicle, and that the retina is really to be considered a part of the brain, we see the importance of these results. If the growth and development of the brain is retarded or interfered with, we would expect then some indication in the eye. That this is true our result in the case of the paralytics has shown, as well as the one of a limited field on the part of the feeble-minded. Whatever value these facts have, if any, in the diagnosis of accidental idiocy, or in making a general prognosis, must be left to future investigation.

RESULTS.—Our results show, on the whole, a marked sense dullness on the part of the feeble-minded, with a very characteristic high mean variation. Is, then, this deficiency due to imperfections of the sense organs, or is it chiefly central? Seguin has defined idiocy as an "intelligence badly served by sense organs." With this definition no modern author agrees. Idiots are defined as beings more or less deprived of intelligence. However, such cases do infrequently occur and have grouped together under the name of idiots by deprivation. In order to produce such a condition, the sense deficiency must be great, such as loss of both sight and hearing. But such a deficiency exists among only a few feeble-minded children. Given a sense deficiency, such as is common with our children and a normal intelligence, the child would soon, by the processes of comparison and reasoning, practically overcome such deficiency so as to be considered a normal minded person.

*Op. Cit., p. 126.
†Lombroso: L'Homme Criminel et La Femme Criminelle.

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In all mental processes, however simple, the mind acts as a unit, the results being conditioned to a greater or less extent by the so-called higher processes of the mind. After the first few times, no child has a pure sensation, for the reproductive processes come into play and we have to corresponding extent perception. The mental life of some idiotic children is no doubt limited to sensations. In general terms lack of appreciation is the chief characteristic of the feeble-minded. This is due to defect of reproduction and discrimination. Since "defective mentality always denotes defective morphology," defective reproduction would mean defective neural continuity in the brain, and defective discrimination would mean fewness of conducting paths. "Bernardini after reading the cases of idiocy recorded in medical literature, has come to the conclusion that diminution in the number of nerve cells in idiocy, and changes in the number and form of their prolongations ought to be ranked as sufficiently proved." Thus the pathological conditions agree with what we would expect, theoretically, from considerations of their mental states. Consequently sense dullness can be explained, in great part, by lack of discrimination, which is due to cerebral conditions otherwise known to exist. However, defect of sense organ does exist, as we have seen when considering the visual fields of the feeble-minded. Consequently we are confirmed in the opinion that the chief lesion of idiocy is central and not peripheral, as most modern authors agree.

Considering the point of pedagogical suggestions, we find that our work emphasizes the importance of sense training. The senses lie at the basis of all knowledge, and they must be trained to their highest efficiency in order to get the best results. The senses are not of equal value for the normal child, and they vary in value to a greater extent among the feeble-minded. Consequently each child's best sense should be cultivated, and then the others aroused and associated with it. To these ends all forms of physical and manual training are of great value.

As a consequence of this different sense capital, we deduce the importance of individual training. However well the normal child may be able to get along with or in spite of the present wholesome methods, for the feeble-minded child this is an impossibility. For his education pedagogical methods must be especially adapted, for it is like no other. Psychology has had much to learn from pathology, and we hazard the opinion that pedagogy has at least as much to learn.

Another consequence is the importance of the psychological examination. To apply particular methods to an individual case, the conditions must be known. These can only be brought out by such an examination. Some day this is destined to become a part of all pedagogical procedure. At present it is a rather ambitious forecast for both psychology and pedagogy.

BRAINARD DISTRICT MEDICAL SOCIETY.—This society held its meeting in Jacksonville, October 25th, and an interesting program was presented. The papers and discussions will appear in the next issue of the FORTNIGHTLY.

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Diseases of the Stomach.

BY J. M. G. CARTER, M. A., M. D., SC. D., PH. D.,

WAUKEGAN, ILL.,

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[CONTINUED FROM PAGE 601.]

CHAPTER IV.—LOCAL TREATMENT OF THE STOMACH (CONTINUED).

Electricity.—The use of electricity in the diseases of the stomach is of such importance that it demands the attention of the specialist in this department of therapeutics and is of interest to the general practitioner. It requires a fundamental knowledge of the subject. No one should undertake the treatment by electricity of diseases of any organ, and especially those of the stomach, who has not made himself acquainted with the elementary principles and the general therapeutic applications of this powerful agent. The intimate relations of the stomach with the solar plexus and the nervous supply of the heart, lungs and other important organs demand especial care and forethought in applying electricity to this viscus.

There seems to be some difference of opinion as to the manner in which remedies influence the organism. The question is in reference to stimulating or inhibiting action upon tissues. Without entering into a general discussion of this point, it may be stated that for practical purposes we may grant that both effects may be observed under different circumstances, according to the *intensity* of the action or the *amount* of the agent administered. A small dose of opium, for instance, is stimulating, while a large dose has a paralyzing effect. Small doses of the mineral acids—especially sulphuric and nitric—stimulate tissues, increase secretions, but very large doses totally destroy cell activity and structure. Other illustrations might be given to show that a difference in *degree* of effect makes an apparent difference in *kind* of effect. We observe the same kind of difference in effect between different *intensities* of electricity and variations of current. This explains the beneficial effects derived from very mild currents in many instances where stronger currents have failed to make an impression. Mild currents stimulate the metabolic function; strong or very strong currents are apt to disturb metabolism. Mild currents produce a restful sleep. Strong currents will cause severe contractions, pain, nausea, cataphoresis and cautery effects according to *kind* of *current* used. I have administered this agent in small doses with success where I had failed with stronger currents. If, for instance, the mucous membrane of the stomach is in an anemic condition, and the secretions consequently falling below the norm, a strong induced current may accomplish no good while a mild current will stimulate the glands to increased secretion, partly by increasing the blood supply, and partly by increasing cell activity.

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Another point of considerable importance is the fact that the amount of electricity which a patient can bear, like the quantity of many, if not all drugs, depends somewhat upon the atmospheric pressure at the time of administration. Every electrician has observed that a patient is differently effected by the same current at different times; on clear, bright days the effect is different from that on damp, cloudy days. I have observed that the same law prevails when drugs are prescribed. Hence the conditions of atmospheric pressure which would indicate caution in prescribing drugs warn us not to push electricity to the same extent that might with impunity be reached at another time. A patient may not feel a current of twenty milliamperes on a cloudy, damp morning, while on a clear, crisp morning he may suffer some distress from the same dosage. The laws governing the administration of drugs, then may frequently serve as guides to us in applying electricity in the treatment of gastric and other affections.

The objects to be accomplished by the use of electricity in diseases of the stomach are few, but important. The relief of pain is very important at times in certain neurotics. Other objects are the correction of the quantity of gastric secretion, to increase it when deficient (Hoffmann), and to reduce it when in excess, as in hypersecretion and gastrosuccorrhea. It may be used for its tonic influence in gastrectasis (Fuerstner, Canstatt, Duchenne) and to control catarrhal inflammation. These are the chief uses for electricity in the therapeutics of gastric affections, but they are seen to be very important. In many cases of atonic dyspepsia and in nervous conditions accompanied by gastralgia or gastrodynia (Rockwell and Beard) where it is desirable to avoid the use of opiates, elcctricity will frequently give quick temporary relief, and a prolonged use may produce a cure. In cases of hypersecretion of gastric juice with hyperemia of the mucous membrane undoubted beneficial effects are often realized from the application of the galvanic current, the positive pole intra-ventral. If the secretion is deficient, with reversal of the poles electricity is often as serviceable as it is for hypersecretion. The hyperemia produced in the gastric mucous membrane by the intra-ventral application of the faradic current is such as to feed the viscus with an extra supply of blood, and thus serve as a real tonic measure, and nutritive in anemic conditions; forming a powerful adjuvant to iron, hemoglobin and similar tonics.

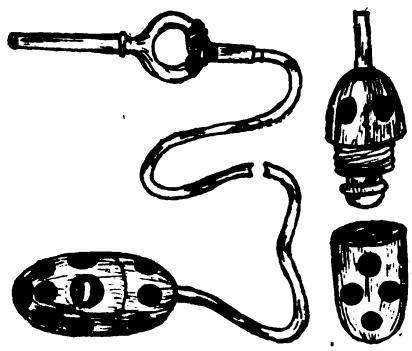

FIG. 11.—Einhorn's Stomach Electrode.

I have used the faradic and galvanic currents separately and combined in the treatment of diseases of the stomach. Einhorn's stomach electrode is well adapted for internal use. This consists of an ordinary battery cord covered with rubber tubing, to which is attached a small electrode covered with a hard rubber olive-shaped perforated protector (Fig. 11). In the absence of this instru-

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ment an ordinary cord may be introduced through the stomach-tube, care being taken not to permit the metallic electrode to come in contact with the gastric mucous membrane. Always direct the patient to drink a glassful of water before introducing the tube. Any electrode with a large area will answer for the external pole. I sometimes use a wire or copper frame 8 by 14 inches (Fig. 12), and place between this and the body of the patient cotton batting about one inch in thickness. This is applied over the stomach. The object is to dissipate the current externally. An ordinary sponge electrode, 6 by 9 inches, can be used very successfully. I have used a soft flexible wire-cloth electrode covered with a sponge, and like it very well. The spongiopiline electrode is also excellent (Martin). When it is desired to apply the current directly to the gastric mucous membrane, the Einhorn electrode (Fig. 11) should be introduced, being first moistened by dipping in warm water, after which the patient is directed to swallow it. Over the epigastrium the cotton electrode may be placed in simple cases. Under such circumstances the current affects the entire mucous surface of the stomach. In cases where it is desirable to use both currents the current combiner is needed.

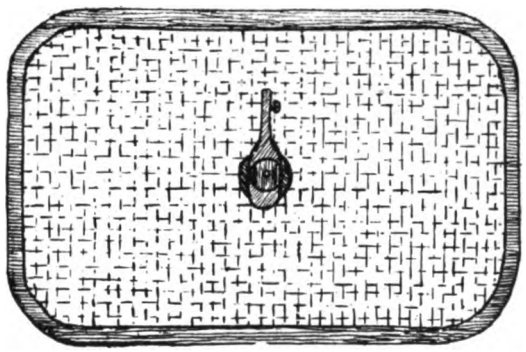

FIG. 12.—Abdominal Electrode.

Several gastric diseases or morbid conditions are benefited by applications of electricity. All forms of neuroses, as gastralgia, hiccough, vomiting, nervous belching, functional dyspepsia in any form may be properly treated by electricity. In those neuroses dependent upon derangement of the central nervous system, central galvanization or faradization will often produce marked benefit. I have obtained success in neuroses due to uterine or ovarian irritation with functional dyspepsia by applying the positive galvanic pole over the sensitive pelvic region, the positive faradic pole over the epigastrium and the combined negative pole (Einhorn electrode) in the stomach. If there is greater tenderness over the stomach than over the pelvic region, as sometimes occurs, the positive galvanic pole should be placed over the epigastrium, and the positive faradic over the pelvic.

If the gastric neurosis is due to some local cause the poles may be applied to the back and epigastrium, provided the sensitiveness is external; but if the gastric mucous membrane is hypersensitive, the positive pole should be used intraventrally. In some cases the intraventral use of the electrode must be avoided; in such cases the poles may be applied to the epigastrium a little distance apart, or one to the epigastrium, and the other

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in the cervical or dorsal region of the spinal column. The positive pole should be used in the same way in gastralgia or gastrodynia, and in hypersecretion of gastric juice; but in diminished secretion the negative pole should be internal. It goes without saying that gastric neuroses due to reflex nervous irritation or central nervous disease will not yield to treatment which fails to recognize the primary pathological condition. The dosage will vary from 10 to 25 milliamperes. The faradic will often give relief in gastralgia as quickly as the galvanic current. The same is true of the rapidly interruptod static induction current.

The best results from the use of electricity in diseases of the stomach are found in the neuroses, but the therapeutic applications of this agent may with confidence be extended to other derangements.

In atony of the gastric mucous membrane and parieties electricity produces excellent results. It restores muscular tone, excites the nerves and increases the blood supply, thus aiding nutrition—the most essential element in restoring the tissues to their normal condition. Most cases of indigestion and dyspepsia for which relief is sought are not due to organic lesion, suffer no structural change, but are due to deficient secretion of gastric juice or impaired muscular tone. These conditions and feebleness of the organ, as shown in diminished movements, are positively benefited by electricity. If secretion is diminished the negative pole of the galvanic current should be placed iutraventrally. The faradic battery, the labile (moving) pole over the opigastrium, the stabile (stationary) pole in the spinal region, does well when atony of the muscles is the only source of trouble, especially if the current is of high tension and rapid interruption. Atony with diminished secretion—a common condition—may be treated with the combined current. The tendency of electricity in these cases is to increase the quantity and modify the quality of the secretion. Whether the derangements of digestion depend upon an exhaustion of the nervous system which interferes with the normal activity of the process of secretion, or whether the vascular supply is deficient in quantity or quality, the power which electricity has to modify the physiological functions of the body suggests it as a most valuable remedy; and its use in these cases has strengthened the confidence which theory had aroused in this agent. General faradization is especially valuable. The current controller should be used with both forms, the faradic and galvanic. I never apply electricity in either form to a patient without the controller. The sudden shock of the faradic current when this instrument is not used is distressing to most patients, and the gradual increase of the galvanic current by this means has much better effect than the successive addition of cells. In sensitive conditions of the stomach this regulation of the current is especially desirable.

Paralysis and nervous spasm of the stomach are generally benefited by electricity. The faradic current may be thus applied, anode (large electrode) a little to the left of the spinous processes, at the level of the cardiac end of the stomach; the cathode (small electrode) labile (moving) over the epigastrium. The galvanic current may be similarly used. I often find that the anode at the base of the cranium gives most excellent

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results. In most of these cases we desire to affect the vagus nerve, as we do in prolonged vomiting and gastric manifestations of hysteria.

Chronic gastrectasis (dilatation) due to atony, gormandizing, spasm of the pylorus, and possibly fibroid thickenings, is often amenable to electricity. These cases may be handled in the same manner as cases of atony. If the dilatation is due to cancer or ulcer, the use of this agent will be of little value.

Electricity is often very useful if combined with massage. The kneading of the gastric walls aids in restoring the normal condition in cases of neurasthenia, and in otherwise debilitated subjects. It is a good practice to combine these in cases of constipation. The kneading should follow the course of the ascending, transverse and descending colon.

CHAPTER V.—DIET IN DISEASES OF THE STOMACH.

Some general remarks may be made in reference to the proper diet to be used in diseases of the stomach. A study of diet in this connection is important, not only because of its relation to general nutrition, but in view of the fact that in some gastric diseases certain foods are to be discarded on account of some evident contraindication.

It is desirable to know two things in reference to articles of diet: First, what foods are allowable; and second, their digestibility. We may, then, pass in review briefly most classes of food, and for convenience group them as follows in regard to use in severe forms of dyspepsia:

A. Foods forbidden in all cases.
B. Foods occasionally allowable.
C. Foods which are desirable.

A. *Foods forbidden in all cases.*

1. Rich soups, gravies and sauces.
2. Strong condiments and pickles.
3. Fresh soft bread of any kind (which makes a tenaceous bolus), hot breads, pastry of all kinds, griddle cakes, doughnuts, muffins.
4. Sweets, tarts, jam, confectionery and candies of every kind. Sugar in all forms, especially in coffee and with milk.
5. Raw vegetables, such as celery, radishes, coldslaw.
6. Heavy starchy vegetables— potatoes, sweet potatoes, corn, peas, beans, eggplant, cabbage, cauliflower, Brussel's sprouts, turnips, carrots, parsnips (all the roots and tubers).
7. Fat in any quantity, all fried or greasy food.
8. Lobsters, crabs, shrimps, salmon, herring.
9. Dried, smoked, cured, potted, or devilled meats, fish and pork of every kind.
10. Corned beef, duck, goose, wild fowl, rabbit. Veal, except as broth.
11. Twice-cooked meats, hash (unless freshly made without potatoes), stews, ragouts.
12. Cheese of all kinds.

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13. Very acid or very sweet fruits, nuts, dried fruits in general. All skins and seeds of fruits.

14. Tea, beer and sour wines.

The excessive use of tobacco in any form should be forbidden.

B. *Foods occasionally allowable.*

There are foods which may be allowed to some patients, but not to others, and many of them constitute exceptions to the foregoing general rules. Such are:

Vegetables.—Mealy, well-baked potatoes, not too young or new, raw tomatoes, spinach, thoroughly boiled onions, very young, tender, fresh peas, very young Lima beans, string beans, asparagus, celery, celery plant (sea-kale).

Starchy Foods.—Where it is desirable to give starchy food of some kind, macaroni, spaghetti, or rice may be allowed, or one of the prepared foods, such as Carnrick's, Mellin's or Horlick's.

Fats.—Bacon, very fat, sliced thin and well broiled; cream, good, fresh butter, olive oil (nuts).

Eggs.—Many patients find that eggs disagree with them constantly. There are a few who can take them with impunity if rightly cooked—that is cooked very slowly and soft. They sometimes agree better when not given with other food, but as eggnog.

As a rule sweet fruits disagree, though they can be eaten by some patients.

C. *Desirable foods to be recommended in ordinary cases are:*

Cereals.—Wheaten bread, porous or aerated, stale or toasted; dry unsweetened rusk or Zweiback; soda crackers. (The bread from some bakers is easier of digestion than that of others.) Macaroni, sometimes oatmeal, but without sugar.

Fats.—In moderation only; butter to be very thinly spread or well rubbed in. Sometimes a thin rasher of bacon, (nuts).

Vegetables.—Chiefly as *purees,* thoroughly cooked, made of tomatoes, asparagus, or sometimes potatoes or fresh peas. (Fresh green vegetables as in preceding list.) Lettuce.

Fish.—Oysters, fresh-boiled or broiled fish without rich sauces. (Some persons cannot eat fish at all.) They may be eaten with a little fresh butter and salt. (Fish should be skinned before cooking.)

Eggs.—In any form (except hard-boiled or fried) if they are found to agree.

Sweetbreads, Meats.—Broiled steak or chop, tender roast beef or mutton, chicken (roasted or broiled), boiled capon, roast partridge, grouse, woodcock, plover, prairie chicken, squab. All meats should be short fibered and tender. They need not be very rare. Grilling is the best method of cooking them.

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Fruit.—Baked or stewed apples or prunes. Occasionally a little fresh fruit in season, better eaten between meals to prevent constipation. Oranges, peaches, grape fruit (Thompson).

The list here given can be extended, many foods herein forbidden may be used, and many allowed must be forbidden in some cases. Idiosyncrasy plays an important role in the diet of dyspeptics. Other factors must be considered, and from a comprehensive study of the case the dietary may be prescribed.

It is desirable to know the composition of foods so as to be able to prescribe food which will sustain the body, while selecting such as may agree and be easily digestible. The latter point must not be overlooked. When the digestive powers are impaired, the process is retarded and easily digestible food should be prescribed. The relative proportion of the most important elements in the body must be conserved as far as possible.

Meats contain approximately three parts of carbon to one of nitrogen, while in vegetable food carbon is in much greater proportion than the body requires.

Now the body requires a food which contains about 15 parts of carbon to 1 of nitrogen. Neither animal or vegetable food alone will give the proper proportion of these two very important elements; for this reason a mixed diet should always be prescribed. If for any reason a single liquid diet is necessary milk should, if possible, be used, as the various elements necessary for the body's support are found in that food, almost in proper proportion. "Malted meat," Horlick's malted milk, Carnrick's soluble food, liquid peptonoids and a few other preparations are excellent foods for weak and diseased stomachs and for use in the sick room.

In addition to the three classes of food usually mentioned—proteids, hydrocarbons and carbohydrates—inorganic salts and water are essential food elements.

Various estimates have been made as to the amount of food required to nourish a man properly for twenty-four hours. Only an average can be given, as the amount required varies somewhat with the individual. It has been estimated that 130 gm. albumin, 84 gm. fat, and 404 gm. of carbohydrates are required for an adult doing medium work (Hare). Old people, especially women, may subsist comfortably upon 67 gm. albumen, 38 gm. fat, 266 gm. carbohydrates (J. Forster).

[TO BE CONTINUED.]

THE PLAGUE ON THE PACIFIC COAST.—It has been amusing to follow the discussion of the plague (?) situation on the Pacific Coast. It seems that eminent authorities confirm and deny its presence at San Francisco. During a recent visit to the city we observed that the lesser lights and the public in general were satisfied that it was a false alarm. But we also observed that Chinatown would seem a favorable place for it to make ts appearance and to flourish.

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How Can the Mortality of Cancer of the Uterus be Reduced?

BY BRYON B. DAVIS, M. D.,

OMAHA, NEB.

Read before the Medical Society of the Missouri Valley at Council Bluffs, September 20.

The magnitude of the operation of hysterectomy has been increased about as far as is likely to be profitable. The decrease in the mortality of uterine carcinoma is scarcely to be looked for in any farther elaboration of the technique. It is not probable that many cases so advanced as to necessitate the removal of the deep inguinal, iliac and lumbar gland will be cured by any operation no matter how extensive the dissection. The present outlook for one found suffering with this disease is decidedly gloomy. The percentage of recurrences seems to be running from 50 to 75 in carcinoma of the body; to 90 and 95 and even 99 in those cases in which the cervix is involved. Prophylaxis and early diagnosis and operation before the disease ceases to be local seems to furnish the only rays of hope for improvement.

PROPHYLAXIS.

The etiology of malignant epithelial disease is unknown, and time will not be wasted in a discussion of all the various theories. The only thing that seems actually and firmly established is the fact that trumatisms, irritations and chronic inflammations act as exciting causes. Proofs of this are so numerous that no argument is needed to win consent to the proposition. This being granted it becomes the duty of medical practitioners to institute measures for the relief of all those sources of irritation which seem so fruitful in the production of the disease.

The great majority of cases of uterine carcinoma are of the cervix. Carcinomata of the cervix usually occur in women who have borne children, or whose cervixes have been in some other manner lacerated. The starting point is almost always in a scar resulting from a cervical laceration. There is reason to believe that the irritated scars, those that are kept eroded or contain a large amount of dense cicatricial tissue are the ones which most frequently take on malignancy. There is also evidence that the few nullipara who are subjects of carcinoma of the cervix are troubled for a long time prior to the onset of the disease by cervical erosions, or adenomata.

Repair of every lacerated cervix is not to be advised. That would be tantamount to advising repair of every parous cervix. Most of these lacerations heal in such a manner that no irritability is left. These may safely be disregarded. It is only those that are

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chronically eroded and tender to the touch that need repair. Nor does this depend upon the size of the tear. Sometimes large lacerations are seen which cause no symptoms, are not tender to the touch, or eroded; such need not be tampered with. When a tear is met with, large or insignificant, which is tender to slight pressure, eroded and the woman is below par, suffering from ill-defined pelvic pains, with usually an endometritis, a cure of that condition is advised by the means which will quickest and surest bring relief. In most cases such relief can be reached best by careful curettage of the uterus and repair or amputation of the cervix, but not always. This condition is sometimes due as much to general causes as local. A woman may have been subjected to excessive work or worry; some easily explainable cause may have undermined her general health; indigestion, constipation or sexual abuses may have contributed largely to the local phenomena. Such patients may be curetted, and curetted, and curetted, and have their cervices repaired in the most approved manner and still they are no better. Here the best of hygienic surroundings, good food, rest and cessation of worry, with general and local cleanliness will often cause the endometritis to speedily disappear and the cervix to take on a healthy condition. It is therefore believed that these conditions which have been shown to be exciting causes of cancer, should be removed by the best and most common-sense manner without pinning our faith to any one measure or cure-all.

Why adeno-carcinoma of the body of the uterus should seem more prone to affect those who have not borne children has not been explained. Whether the epithelial cells lining the uterine cavity, retain some of their embryonic qualities until ripened by child-bearing is not clear. Perhaps a corporeal endometritis in a uterus whose cervical canal has never been dilated by child-bearing may prove more irritating than in one where the drainage is freer. If this is the case nulliparous women with corporeal endometritis demand relief as a prophylactic measure just as imperatively as do women with lacerated cervices. Should the endometritis be troublesome enough to lead to the question of the advisability of dilating and curetting, the possibility of this condition, having an influence in the producton of malignant disease might weigh something in deciding what to advise.

Could all women be carefully cared for with the view of preventing carcinoma it might aid somewhat in reducing the number afflicted with this disease. This would not necessitate any operation or any treatment which was not also needed to secure the greatest comfort and the best state of health. The prophylactic measures advised simply accentuate our duty to make our patients as comfortable as possible.

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EARLY DIAGNOSIS.

That carcinoma is primarily a local disease needs no argument. That, as long as confined to its original focus, clean and complete removal will eradicate the disease goes without saying. Therefore a sufficiently early diagnosis of carcinoma of the uterus followed by immediate hysterectomy would have no mortality, except the operative mortality. There would be no recurrences.

Granting the truth of the foregoing we are not as alert in trying to make a diagnosis of malignant disease of the uterus while it is still local as we ought to be. Could the whole truth be known a large percentage of the cases that present themselves for operation were susceptible of diagnosis months before. During all these months between the time when a diagnosis was first possible and the date of the operation the disease has been extending by continuity and by dissemination via the lymphatics. The responsibility for this fatal delay rests upon the patient on the one hand and the medical profession on the other.

As representatives of the medical cult we often try to dodge and to throw all of this tremendous responsibility upon the poor weak shoulders of the patient who already has enough to bear without being accused of a crime of which she is only in part guilty. She may frequently be tardy in consulting her physician, but her complaints do not always meet with a prompt and sympathetic response? It frequently happens that she consults her physician at the onset of the earliest symptoms and is laughed at for being overanxious, and told that there is nothing the matter and that she is all right?

The question before us is very largely one for the general practitioner and without his active co-operation cancer of the uterus will continue to be one of the most discouraging chapters with which we have to deal. When all members of the profession put themselves in the attitude of detectives weighing every scrap of evidence and rejecting nothing because it is too trivial there is good reason to believe that a large proportion of the cases of malignant disease of the uterus will be discovered at a sufficiently early period so that operative intervention will not be followed by 70 per cent. or 80 per cent or 90 per cent of recurrences, but by a very low percentage.

"But," some one may say, "women are not ready to submit to such an operation as hysterectomy at an early stage, but will try the quacks first." In this I believe many physicians are laboring under a mistake. When men go carefully and logically about making an early diagnosis, and give clear-cut reasons for advising early intervention, showing their patients that in early operation is their only hope, and more, when they can point to women who have been operated upon early and cured, this wide-spread fear of operation

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will be found to pass away. In the past the charlatan has flourished on the luke-warmness and indifference of those who should take the lead.

"But women treat the early symptoms of uterine cancer as trivial matters and would not submit to an examination at the first indication of something wrong." As a matter of fact very few women will object to an examination if a good reason is given for advising it. One having considerable experience with these cases would scarcely dare say what proportion of women they see with incurable cancer of the uterus, who complain bitterly that they had gone to their physician months before with their symptoms and he had not even suggested the need of an examination. It is often hard to explain away the apparent neglect. Too often physicians postpone advising examination because of a natural shrinking from even the suggestion to their patients of the possibility of malignant disease. The sentiment back of this is good, but the results are disastrous. One is not doing his duty when he makes light of a laughs at her fears ,and allows the disease to complete its work uterine hemorrhage, gives the poor victim some medicine, perhaps without a friendly warning. When one permits himself to temporize in the presence of a possible malignant disease he becomes an accessory to the patient's death just as really as if he were to allow her to meet with a violent death when within his power to avert it.

There is no need to go into detail with regard to diagnosis. It ought in the first place to be impressed upon the lay mind with all the force of the army of family physicians that the "change of life" is not fraught with all the terrible things so often supposed. That uterine hemorrhage in excess or at an unphysiological time should always be investigated whatever the age of the patient. It may mean abortion, fibroids, hemorrhagic endometritis, tubal disease or cancer. Any one of these is of sufficient moment to demand examination; not a simple duty touch, but the most painstaking care of which one is capable. If this woman were accused of murder and were being tried for her life an array of legal talent and an army of expert witnesses would be engaged for days in her defence. Is her life any less valuable because she is threatened with death in a more insidious way and from no fault of hers?

In 1895, J. Knowsley Thornton, before the British Medical Association, made an earnest plea for earlier diagnosis in malignant disease of the uterus, from which the following quotation is taken: "How is an early diagnosis to be made? Clearly by neglecting no menstrual departure from the normal, however trivial it may at first sight appear, but at once to encourage the patient to accurately discribe her symptoms, and above all to insist in the most determined manner on a local examination. * * * * * Let me then appeal to all engaged in family practice who listen to me here, and to that larger body who may read my

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words when reproduced in the medical journals, to sternly cast aside that too great modesty, or that tendency to treat as trivial small symptoms, and to at once take alarm about, and carefully investigate every case in which there is brought to their notice an abnormality in menstruation or a vaginal discharge of any kind however trifling. A very grave responsibility lies at the door of the medical profession for the small progress made in the early diagnosis of uterine cancer and its successful treatment."

Hemorrhage as a rule is the one sign first present. The slightest hemorrhage appearing after the menopanse should rouse suspicion, and hemorrhage in excessive amount or at an unexpected time at any age should be investigated. When the malodorous discharge makes its appearance it means the casting off of necrotic tissue and that already the disease is well advanced. Pain is scarcely ever present until late in the disease. It is no longer thought necessary to wait for ulceration and pain before making a diagnosis of cancer of the breast and it should no more be considered necessary to wait for the frightful odor and awful pain which mark the closing scenes before making a diagnosis of cancer of the uterus.

Early diagnosis is difficult, but if the case is to be allowed to drift along until the patient makes her own diagnosis the frightful mortality of this disease will continue. When an examination is made in the early stage, a hugh cauliflower excrescence is not to be expected, but if an eroded surface which bleeds easily is found on the vaginal portion of the cervix, or advancing out from the cervical canal, it will be best to clip out a good piece for microscopic examination. It is probable that the miscroscope in the hands of a trained pathologist makes fewer errors when cancer of the uterus is in question than in almost any other organ of the body. The picture is usually clear and convincing even at a very early stage.

If the erosion does not bleed easily and there is a muco-purulent discharge from the uterus, or if the discharge is present without an erosion, and there has been an unexplained hemorrhage, the case cannot consistently be dismissed as one of endometritis; it may mean adeno-carcinoma of the cervix or body of the uterus. Here if the patient is told the plain truth she will not usually decline to take an anaesthetic and submit to a thorough curettage. The curettage should be systematic including the entire cavity of body and cervix and all the scrapings should be saved for microscopic examination. The curettage should be thus thorough for two reasons: First, because if the trouble is only endometritis this thorough work will probably cure her; second, if the disease is in an early stage it may involve only a small area of the mucosa and if the whole surface is not scraped away the very portion diseased may be missed and the pathological examination show nothing of the real character of the disease, the case be declared non-cancer-

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ous and the woman doomed. The specimen obtained by clipping away a portion of the cervix or by curetting, should be examined by a competent pathologist. If the physician in charge of the case has had thorough training he is equipped for this work; if not he should send it to one whose skill is unquestioned.

As soon as the report of the pathologist is made it should be made known to the patient or her family. If it is found not to be cancer this task is easy. If cancer is found the patient should be told kindly but firmly what it is best to do. At this time no temporizing should be tolerated. To compromise with her on a month's or on a week's delay to see what can be accomplished by local treatment or by the use of some cancer specific of which some friend has told her will not do. She must be made to know that there is only one mode of cure yet known and that every day's delay decreases her chances of permanent cure. This should be urged upon her in such a manner as to convince and I believe if more effort were made in this direction the advice would usually be followed. Half-hearted advice given by a half-hearted doctor simply invites rejection. In many instances it is all right to stand back and let a patient take her own time and manner of obtaining relief, but here the life of the patient is the penalty if the advice is not followed. If the disease has already passed to such a stage that the results of operation are decidedly grave there is much excuse for luke-warm advice, but when the diagnosis has been made early, the advice may safely be clear-cut and positive.

The following conclusions seem to be warranted by the facts:

First. Prophylaxis of cancer of the uterus is to a limited degree possible.

Second. The mortality of uterine carcinoma continues very high because the diagnosis and operation are so late.

Third. Earlier diagnosis is possible by methods already understood.

Fourth. The earlier the operation the less will be the operative mortality.

Fifth. Carcinoma being primarily local, if the ideal could be realized of making the diagnosis and operation in all cases while the disease is confined to the uterus, there would be no recurrences.

Carefully compare the injured with the uninjured joint. Ascertain if possible if there was any previous deformity. If there is a discoloration reduce it, if a fracture replace the fragments of bone.

PRELIMINARY ANNOUNCEMENT.—The next meeting of the Western Surgical and Gynecological Association will be held in Minneapolis, Minn., Dec. 27-28, 1900. Send titles of papers to Dr. George H. Simmons, Secretary-Treasurer, Chicago.

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AMONG THE MAGAZINES.

MISS ALCOTT'S "LITTLE MEN" IN A PLAY.—Elizabeth Lincoln Gould resuscitated Miss Alcott's "Little Men," and, with their old teacher and his good wife, has put them in a drama, which she calls "The 'Little Men' Play." All those good Plumfield folks who have entertained thousands of boys and girls are brought back in the flesh and live their school-days over again. The play will be published in the December *Ladies' Home Journal*.

THE November number of the *Review of Reviews* marks the culmination of the Presidential campaign of 1900. Its various departments—"The Progress of the World," "Record of Current Events," "Cartoons." and "Leading Articles of the Month"—summarize the things worth remembering in connection with the political contests of the year in the United States, Canada and Great Britain, while contributed articles describe in detail the campaign methods employed in Chicago, New York and London, and the rudimentary party organizations of Porto Rico. Its editorial treatment of current politics has given the *Review* a unique distinction among magazines.

THE great Trans-Siberian Railway, described by Henry Norman in his series on "Russia of Today," leads the November number of *Scribner's Magazine*. The railway is the commercial and political key to the Far East and Mr. Norman travelled its entire length so far as completed, to Lake Baikal and beyond. He describes the wonderful industrial possibilities of the country through which he passed and gives an entirely new idea of Siberia. Instead of a desert it promises to be the leading wheat-producing country of the world, and the railway opens up immense mineral possibilities. Mr. Norman says that since the great wall of China the world has seen no one material undertaking of equal magnitude. The cost of this railway will be about $500,000,000, and its total length 5,486 miles. Illustrated throughout with the author's photographs.

THE November *Century*, beginning the magazine's thirty-first year, is the first of two numbers especially noteworthy, not only for the interest of their contents, but for the beauty and abundance of their illustrations. The rich effects of color printing are seen in the pictures illustrating an outdoor paper by Maurice Thompson, in which the reader is transported to the shores of the Gulf of Mexico, and in three full-page reproductions of the work of "A New Sculptor," Hendrick Christian Andersen. But while the eye will be caught first by the pictorial features of the number, its appeal to the mind is no less strong; for with November the *Century* begins a Year of Romance, in the course of which it will present a remarkable number of short stories by famous writers, with several larger ones, and two or three serials running through six months or more. In the present issue appear the opening chapters of "Her Mountain Lover," a novelette by Hamlin Garland, in which a typical Western American, racy of the soil, unschooled except in the craft of the plains and mountains, full of humor and good humor, is sent to London to float the stocks of a mine. His social adventures there, and the story of his two affairs of the heart, foreign and domestic, with the contrast of wild Western and old English backgrounds, make the tale peculiarly picturesque and suggestive.

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Favorite Prescriptions

Bright's Disease.—

℞ Copaiba resin..... gr. 10
Diluted alcohol..... m 15
Spir. of chloroform..... m 10
Syr. of ginger..... m 40
Mucilage acacia..... m 80
Aq., to make..... fl. ℥j

M. Sig. Tablespoonful, or the whole, at a dose.—*Merck's Archives.*

Sweating Feet.—Professor Kaposi recommends the following:

℞ Sodii salicyl..... gr. xxx
Kali permangan..... dr. i
Bismuthl subnit..... dr. xii
Pulv. talc., q. s. ad..... oz. iii

M. et ft. pulv. Sig. Dust on feet and into stockings and shoes every morning.—*Ex.*

Nutrient Enemata.—In many instances a nutrient enema composed only of whiskey and peptonized milk will not be retained by the patient. A better combination, and one which will give more satisfactory results, is the following:

℞ Beef peptonoids..... ℥ii
Yolk of egg..... No. 1
Whiskey..... ℥ss
Tr. opii..... m v-x
Salt, q. s.....
Peptonized milk, q. s. ad..... ℥vi

Removal of Superficial Epithelioma.—

℞ Wheat flour.....
Pulveris amyli.....aa ℥ii
Acidi arsenosi..... gr. xv
Cinnebar (hydrarg. sulphid).....
Ammonii chloridi .....
Hydrargyri chloridi corros.....aa gr. lxxv
Solutionis zinci chloridi..... ℥viii

Rub each ingredient separately, and then together in an earthen vessel and finally add the solution of zinc chlorid drop by drop.

The above paste is by Bougard, and is said to be superior to Marsden's preparation for the removal of superficial epithelioma.—*Am. Jour. of Surg. and Gyn.*

Exophthalmic Goitre.—

℞ Syr. hydriodic acid..... ℥iij
Syr. hypophosphites (McArthur's)..... ℥ix

M. Sig. Dessertspoonful before meals and at bed-time. Should be administered in wine or milk.

DR. R. W. HALE, of Otto, Wyoming, is doing post-graduate work in St. Louis and renewing his acquaintance with the many friends who knew him as a student at the old Missouri Medical College in the early nineties.

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For Sale.—A lucrative Eye, Ear, Nose and Throat practice in a prosperous Western city. Rare opportunity. Address SPECIALIST, care Fortnightly Press Co., St. Louis, Mo.

Treatment of Whooping Cough.—Godshaw (*Medical Progress*, August, 1899) laments the fact that notwithstanding persistent study and experimentation we do not possess any reliable means for cutting short an attack of whooping cough. The best treatment will do no more than palliate symptoms and diminish the frequency and severity of the paroxysms of coughing. This, however, is very beneficial and frequently essential, especially during the night. An opiate, when carefully selected, will yield the desired results without doing harm, probably better than any other drug. Papine is the best and should be given in dose of five to ten drops to an infant one year old. Older patients will require proportionately larger doses. The object should always be to lessen coughing, that the child may be able to sleep, and not to produce sleep. Some physicians rely chiefly upon antispasmodics—belladonna, bromides, asafetida, etc., but these frequently fail. The inhalation treatment has not proven as satisfactory as was at first hoped. The inhalation of steam is valuable to facilitate expectoration. Careful nursing to avoid complications, and the judicious use of papine will do much to lengthen the interval between fits of coughing even during the daytime, and thus husband the little patient's strength.—*Medical News.*

Malt, Creosote, Cod Liver Oil, Climate.—New therapeutic agents, destined to speedily cure phthisis, are a matter of daily appearance, but they have yet to demonstrate their right to a place with the above list. Climate is more generally a successful therapeutic measure in tuberculosis of the lungs than any other, but even climate needs the assistanee of malt, creosote and cod liver oil, if the patient is to be given the best chance for recovery. A higher altitude is indicated in all cases of consumption, but, unfortunately, it is the exceptional patient who is able to avail himself of its benefits; necessity compels the majority to combat with the disease in such an unfavorable climate as prevails in the middle and lower Mississippi Valley. Too often the diagnosis of pulmonary tuberculosis is considered a death warrant from which there is no appeal, but the physician who fails to keep up the fight, and that vigorously while life lasts, is not doing his whole duty. The patient is characteristically hopeful, and while this hope lasts the physician should never allow his energy to flag, if he does there is no question as to the outcome. Malt, creosote and cod liver oil should be given in the form best suited to the individual case and vigorously pushed. We have recently observed happy results from the free use of Guinness' stout and maltine, half and half, and maltine with creosote—these pushed to the limit. In spite of the fact that the destructive process was well under way before the diagnosis was made in each instance, and in spite of our climate, which is one of the most unfavorable, these patients are improving, the symptoms are disappearing, and it seems complete recovery will be the result. With a favorable climate and intelligent treatment consumption should be cured oftener than it is; despondency, hopelessness in the physician is almost as fatal as when it occurs in the patient himself.

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F. P. Clark, M. D., Danbury, Conn.

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PRACTICAL THERAPEUTICS.

INORGANIC IRON.—Henry, in a recent medical essay, after referring to the hypoplasia of the blood-forming organs noted in chlorosis by numerous observers, states that the essence of this affection lies in a reduced amount of hemoglobin, and consequently feeble oxygen-carrying power in the red blood cells, and that this deficiency is due to inherent biochemic peculiarities of the cell itself, which makes absorption of hemoglobin difficult. Referring to the use of iron, he states that on account of their marked stimulating effect upon the hemoglobin-genetic function, inorganic iron is the form in which the remedy should be administered. In three chlorides (liq. ferrisenic) a serious disadvantage of iron preparations—viz., constipation—is completely obviated by combination with the glandular stimulants, bichloride of mercury and arsenic in small, assimilable doses. Give in milk or water.

IMPERIAL GRANUM AT ASHEVILLE—The annual convention of the Mississippi Valley Medical Association, held at Asheville, N. C., Oct. 9, 10, 11 and 12, must be considered among the most successful in the history of the association. Physicians were present from all parts of the country, and practically every prominent manufacturer was represented by an exhibit. Among the most popular was that made by John Carle & Sons, the well-known wholesale druggists of 153 Water street, New York City, of the long established, standard food for infants and invalids, Imperial Granum. Their booth was constantly surrounded by practitioners who listened with interest to the phonograph, and received souvenir boutonnieres and handsome stamp cases.

We have recently been informed by Messrs. John Carle & Sons that stamp case, similar to those given at the meeting, will be forwarded to all readers of our journal, sending their professional cards to the above address.

CLEANLINESS OF THE SICK ROOM.—Justice to both patient and physician demands that the sick room be septically clean; especially in the case of contagions. To be clean in the sense of the word as used by the house-wife is not sufficient. The free use of reliable antiseptics and germicides is all-important and absolutely necessary. This can be best accomplished by a liberal use of Saola (Tilden's), diluted three parts to seven parts of water. Cloths wrung from this solution and hung about the room moistens and purifies the atmposphere. Vessels of every character should be disinfected by a free use of this solution. Saola is preferable to all others, inasmuch as it is absolutely odorless, and non-poisonous, therefore safe in the hands of children and servants; being colorless it will not stain the most delicate fabric. A disinfectant of the most pronounced germicidal properties. A liberal use of Saola (Tilden's) is especially recommended in the presence of epidemics such as diphtheria, typhoid fever, etc.

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In the treatment of Nervous Diseases and General Debility. McArthur's Syrup Hypophosphites demonstrates its restorative powers. Here it is not the stimulating action of the remedies usually classed as tonics that is needed. The organic powers of the system are already taxed to their utmost ability to carry on the physiological processes of life. The Hypophosphites of lime and soda gives the much-needed effect in these conditions—not that of a stimulant by irritation, but that of a true nutriment to the starving tissues. Its tonic effects are permanent as they are the effects of a richer blood supply, bringing healthy food and oxygen to the tissues. Thus the patient is gradually brought up to his normal condition.

W. C. Frederick, M. D., Lono, Ark., says: I have used S. H. Kennedy's Extract of Pinus Canadensis (Dark), one to three of water, in sore throat from cold, with splendid results, and have now under treatment a little boy, three years old, suffering from strumous diathesis, who has been afflicted over a year with otorrhea. Have been using as an injection two drachms of S. H. Kennedy's Extract of Pinus Canadensis to four drachms of water, three to five drops, two or three times a day, the ear previously cleansed with castile soap. The little fellow commenced to improve from the very start, and is rapidly improving daily; the discharge has almost ceased. He has been on this treatment for about two weeks.

OPIUM USURPED.—From the Antikamnia Chemical Company, St. Louis, U. S. A., have been received two samples of its products—Antikamnia tablets, and tablets of this substance along with Codeine. Antikamnia as its name implies, is an analgesic and anodyne. It has gained much favour in the United States both for this and for its antipyretic action. A coal-tar preparation from several of the "amido" derivatives, it has been proved not to depress the heart after the manner of other coal-tar derivatives. Each tablet of Antikamnia contains 5 grs. of the drug (the usual dose), which can be repeated every fifteen or twenty minutes, until three or four doses have been taken. The compound tablet consists of 4.74 grs. of antikamnia and 0.25 gr. of codeina, and has been especially brought forward for the treatment of pain where spasm or physical causes of irritation exist, and which is more amenable than to the synthetic drug store. Both the simple and compound tablets merit a trial in neuralgia and neuralgia and spasmodic ailments and as their freedom from injurious action upon the heart and circulation is invariable, they will certainly continue to be received by the profession with favour. —Edinburgh Medical Journal, March, 1900.

DRINKING WITH MEALS.

Medical men have pointed out that man is probably the only animal that drinks while eating, showing that the laws of nature, which are instinctively obeyed by the lower animals, are quite calmly ignored by mankind.

However, if one must drink liquids at table, physicians recommend discrimination and insist that water of questionable purity be strictly avoided.

The only type of a water that can be used advantageously at meals is a dietetic mineral water, such as Sparkling Allouez magnesia, as it promotes digestion of the food, and but a very moderate quantity of the effervescent (gaseous) water is required to satisfy the thirst. The carbonic gas in the water not only stimulates and refreshes but drives out bilious gases often present in the stomach giving welcome relief.

By the use of the sparkling water the danger to digestion from diluting the food with an inordinate volume of plain water is avoided.

CORTEXALIN is a fine combination of long known and well approved stomachic tonics prepared with the medium of the best alcohol found in the wine of Burgandy. It will answer the physician in many a case where single bitter tonics will not. It is very recommendable. This product is just being exploited to the profession by the Cortexalin Co., 65 Fifth Ave., N. Y. City, and an announcement will be found in this issue.

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DIPSOMANIA.—Being a stimulant to the peptic and hydrochloric glandular system of the stomach, and exercising at the same time a sedative action upon the engorged mucous membrane—three chlorides Henry—is especially serviceable in those forms of dyspepsia and unequalled for the impaired appetite, nausea, morning vomiting and other symptoms accompanying dipsomania.—Medical Essays.

TREATMENT OF CANCEROUS CACHEXIA.

Lawrence (The Medical Brief, April, 1900) gives as the best treatment for cancer and the cachexia attending it, teaspoonful doses of Ecthol four times daily in conjunction with alterative doses of iodide of arsenic. The latter should be administered in doses ranging from one-sixtieth to one-thirtieth of a grain three times a day and continued for a long period. Ecthol contains the active principle of thuja which is accorded specific value in cancer. The treatment outlined is aimed to cause absorption of the cancerous tissues.—Medical News.

BLOOD CURE OF CHRONIC GASTRIC CATARRH.

By T. J. Biggs, M. D., Stamford, Conn.

Sam A——, age 34, English, admitted June 2, 1900. Diagnosis Chronic Gastric Catarrh. The case was sent to me by Dr. R——, he having given up all hope of doing anything for it himself. Prior to be treated by Dr. R——, the case had been in St. Louis Hospital for six months, but there received little or no benefit.

The general symptoms presenting were: Loss of appetite, disagreeable gnawing, and at times, fullness in the stomach. tenderness at the epigastrium, slightly influenced by eating, almost constant prominence of the epigastrium from distension by decomposing gases. The patient has continual attacks of nausea and vomiting, occurring most frequently on arising, consisting of gray mucus raised after great retching; constant thirst; often great burning at the pit of the stomach; bowels constipated; urine highly colored. There was a constant feeling of mental depression, and sleeplessness, with occasional attacks of vertigo. The patient also had a follicular pharyngitis of an aggravated type. He was very thin, muscles relaxed, and the skin dry. On entering the hospital he was so weak that he had to be carried from the ambulance on a litter.

His secretions were regulated and he was put on absolute bovinine diet, half a teaspoonful every hour in lime water and peptonized milk. Once in twenty-four hours he was rubbed thoroughly with olive oil. The follicular pharyngitis was first treated by cleansing the surface with bovinine—Thiersh followed by spraying the bovinine pure, this being employed every three hours.

On the 10th, the patient felt stronger, was sleeping well, and was not so depressed mentally, burning in the pit of the stomach greatly reduced, no vomiting, but still present nausea and constant thirst. The bovinine was now increased to a tablespoonful every two hours, and the treatment of the pharyngitis reduced to twice in twenty-four hours.

On the 20th, the patient was up and about, feeling much stronger, having gained five pounds in weight. The constant thirst had disappeared as well as the nausea. He also craved some general diet. He was, however, perfectly nourished and did not complain of being hungry, only thought he would like to try and eat something. This was not as yet allowed.

On the 22nd, however, his condition still being on the gain, he was allowed a little rare beef well chopped up, and a piece of toast. This he ate with relish, and retained it without any discomfort. Treatment continued.

On the 23rd, the follicular pharyngitis had entirely disappeared. He was allowed some rare chopped beef, a little rice and toast.

On the 25th, he took a long walk and on returning, said he felt splendidly.

On the 28th, he was discharged, cured, with the advice to continue the bovinine and to report for examination at the end of a week.

The action of the bovinine on this class of cases is as in all others. First, it gives the alimentary tracts absolute rest, and at the same time supplies perfect nutrition, containing as it does every element in the proper proportion to sustain the human organism.

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TREATMENT OF LOCAL TUBERCULOUS LESIONS.

Several years ago Dr. Lawrence F. Flick, of Philadelphia, (Journal of the American Medical Association) made the important observation that the introduction of europhen into the system by inunction and internal administration exerted a very beneficial alterative effect in tubercular cases. This observation has been confirmed by the author in later publications, and also by Dr. E. O. Otis, of Boston, (Boston Medical and Surgical Journal), Dr. F. W. Waugh (Charlotte Medical Journal), Dr. J. Muir ,of New York (American Medico-Surgical Bulletin), Dr. J. L. Barton (Medical Record), and others. Dr. Waugh administered the drug internally in pill form, Dr. Otis in inunctions, and Drs. Muir and Barton in the form of intratracheal and intrabronchial injections. In view of these clinical facts it does not seem surprising that the topical application of europhen should have become one of the most efficient and desirable means if treating local tuberculous lesions. Among other affections it has been utilized with especially good results in the treatment of fissure and fistula, any of which are of so common occurrence in phthisical persons. The late Professor James T. Whittaker, of Cincinnati, (Ohio Medical Journal), was in the habit of treating ulcerations of the rectum of tuberculous origin by the use of europhen suppositories, containing each five grains of the drug, and inserted at bedtime. Dr. Jasinski has also successfully employed it in this class of cases. One of the most striking examples of the curative action of europhen upon local tuberculous processes is furnished by a case reported by Dr. W. H. DeWitt, of Cincinnati, (Cincinnati Lancet-Clinic). The condition was one of extensive tuberculosis verrucosa of the face which had produced extreme disfigurement and had become extremely loathsome to the patient and his surroundings owing to the horrible offensive odor of the discharges from the ulcerative surfaces. Although other remedies had proved entirely useless the local application of a five per cent. solution of europhen in connection with the internal administration of the drug in one grain doses, three times daily, effected a remarkable improvement, the case terminating later in almost complete recovery, with but slight disfigurement considering the extent and severity of the lesions.

"VIN MARIANI" is essentially the brain and nerve tonic of those who have talent and genius. These it is who compose the great army of intellectual workers, and the ravages made upon their nervous systems by the demands made upon them are at times truly appalling. This damage and consequent drain yield to nothing more quickly than to "Vin Mariana." The most noted European physicians, literateurs, musicians, singers, artists and diplomats have sent the most flattering letters to M. Mariani extolling his product. Not only these but crowned heads as well have been mentally invigorated and rejuvenated by "Vin Mariani" and never tire of speaking words in its praise. It must be acknowledged that unsolicited testimonials, couched in such glowing terms, from such sources, are the best evidence possible that can be offered for the merits of the preparation. When "Vin Mariani" becomes as well known in this country as it is in Europe, it will be adopted as one of the indispensable remedies in the household.—The St. Louis Medical and Surgical Journal

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THE TEST OF TIME AND EXPERIENCE is the title of a neat brochure just received from Mr. Jas. I. Fellows, of New York. In this little work will be found much valuable information concerning the treatment and care of tuberculous patients and is well worth reading. A copy will be sent to any physician requesting it.

WIFEHOOD.

When you wind darkly up that solemn way
Where sunset peaks are chilling into gray,
Then I, who kept you path below, may be
Less than a dream, less than a memory.

Yet think! God makes His heavens out of fire;
So He might frame a star from my desire,
And on the wings of glad obedience whirled,
Let me still light your steps, a little world.

—Alice Brown, in the October "New Lippincott."

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The Medical Fortnightly.

Issued Tenth and Twenty-fifth of Every Month by the Fortnightly Press Co.

UNDER THE EDITORIAL DIRECTION OF

FRANK PARSONS NORBURY, M. D. AND THOS. A. HOPKINS, M. D.

Secretary: CHARLES WOOD FASSETT, M. D.

A COSMOPOLITAN BIWEEKLY FOR THE GENERAL PRACTITIONER

Editorial Offices in St. Louis, Chicago, Cincinnati, Jacksonville, St. Joseph, Kansas City, and Pueblo, where specimen copies may be obtained and subscriptions will be taken.

Address all business communications to the Fortnightly Press Company.

Address all contributions and books for review to the Editors, Suite 312, Century Building, Saint Louis.

Volume XVIII NOVEMBER TWENTY-SIXTH Number 10

Editorial Department.

A Mixed Infection in Training Schools.

CHICAGO proposes a mixed infection in the line of irregular practice. This time it is to be a training school for nurses, wherein the rag-tag and bob-tail of the noble healing art can unite in instructing nurses regarding the peculiar intricacies of caring for the sick after the copyrighted methods of these very varied schools. It is to be a mixed infection, to say the least, for we read that the osteopaths, the allopaths (who are they by the way ?); the homeopaths, and the eclectics, like the lion and the lamb, are to feed out of the same box, and chew cuds 'neath the shades of the stunted oaks of Chicago. Behold, too, Bishop Fellows, Rev. Hiram W. Thomas and Rev. Frank DeWitt Talmage are to lend their prayers and support to this mixed infection.

And this school exists for what purpose ? Listen. "It is to give woman training in all duties of skilled nurses without requiring two years of bondage in hospitals and training-schools." In other words, this is a short cut to nursing, and is on the same footing as irregular medical practice, another diploma mill.

Once more esteemed clergymen, who ought to know better, are made the cat's-paw to irregular practice. When will clergymen ever learn to use "applied good sense" and differentiate the true from the false. Any fool, as he runs, can read that this school is out for the money there is in it, and graduates from a ten-bed hospital will be about as well qualified to practice nursing as the bugler of a campaign drum corps is to play solo parts in Thomas' orchestra. Verily, this is the day of pseudo-science, to which is added the mixed infection of pseudo-religion. F. P. N.

DR. W. W. BULETTE, of Pueblo, Colo., has just returned to his home after several days of combined business and pleasure in St. Louis.

DR. R. M. FUNKHOUSER, President of the St. Louis Medical Society, was made City Coroner by the vote of November 6th. The city is to be congratulated.

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Honesty is the Best Policy.

SINCE the time of long ago, when Don Quixote coined the phrase, "honesty is the best policy," it has been the popular sentiment of commercial and professional relationship. In every walk of life honesty is the supreme test of a man's virtues. The varied opportunities in medicine to shade honest endeavor gives to the unscrupulous a chance for appearing to be what he is not. The fake clinical reports commented upon in a recent issue of the FORTNIGHTLY, was an honest endeavor to right a grievous wrong, to which the profession, medical journalists and honest pharmaceutical chemists are subjected. Hypothetical cases are portrayed and hypothetical results achieved, to the disgrace of all concerned. It is time that this pernicious practice cease, and we propose to keep up the fight, believing we are right in advocating honesty as the best policy. That we have the backing of honorable pharmaceutical chemists is shown in the following letters, which we take the liberty to publish:

DETROIT, MICH., U. S. A., November 1, 1900.

THE MEDICAL FORTNIGHTLY, Century Building, St. Louis, Mo.:

Gentlemen:—We beg to acknowledge receipt of a copy of your journal of October 25th, containing an item, on page 627, with reference to our exhibit at the Mississippi Valley Medical Association, for which we desire to thank you.

We have also read with much interest the editorial, entitled "Fake Clinical Reports," from the pen of your Dr. Thos. A. Hopkins, and beg to say that his views on the matter in question are entirely in consonance with our own.

Very truly yours,

PARKE, DAVIS & COMPANY,
By H. P. SKILLMAN,
Manager Advertising Department.

PHILADELPHIA, October 30, 1900.

DR. THOS. A. HOPKINS, St. Louis, Mo.

Dear Sir:—In response to your letter of yesterday, and upon reading the editorial of the last issue of the MEDICAL FORTNIGHTLY, we wish to say amen.

When we first began to advertise our products, we were requested for samples by a certain man living in St. Louis, and enjoying the benefits of a large practice, both of his own and for certain firms that he worked for. Shortly afterwards we received word that our iodomuth gave elegant results and that he would be pleased to publish the reports of the use of that drug for a certain consideration.

It is not necessary to state that said report was never made. It has been the motto of our company, that "not one cent did we have for bribery."

Thanking you for your manly stand, we wish to remain,

Yours very respectfully,

LIBERTY CHEMICAL COMPANY,
S. LEWIS SUMMERS.

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PHILADELPHIA, November 21, 1900.

THE MEDICAL FORTNIGHTLY:

Gentlemen:—We are very much gratified to note the reprint from your recent article relative to "Fake Clinical Reports." We, as well as every other manufacturer, receive letters constantly from physicians who want to give clinical reports for a consideration. This we believe is a very reprehensible custom, and one that cannot but be degrading both to the firm who employs reprints of such and to the scientific (?) investigator. If you have anything further to send us concerning this, we shall be under obligations for same.

You can always count upon our giving you our support in the efforts you are making to conduct a clean and reputable medical journal.

Very truly yours,

H. K. MULFORD COMPANY,
H. K. MULFORD, Vice-President.

THE Roberts-Hawley lymph is making a great play for recognition. It is trying to pose as something really new and worthy. Its votaries are reading papers before reputable medical societies, and seeking to make it appear that "it is the real thing." Recently the Louisville Medico-Chirurgical Society listened to a paper on this wonderful remedy, and a tolerant attitude was assumed by its members in discussion. We wonder if these seeming benighted individuals in intellectual Louisville believe what they say, or are they just spell-binders for the "lymph trust?" Do they not know to what use such discussion and endorsement will be put? Why not come out boldly, and say, as did Dr. Macrae and Dr. Wallace when a similar paper was read and riddled before the Missouri Valley Medical Society at Council Bluffs (*Medical Herald*):

The Roberts-Hawley Lymph.

DR. MACRAE, Sr. of Council Bluffs, said: I believe that the injection of lymph from the goat is a good thing—a good thing to quack with. It was exploited years and years ago by a man who would have brought it forward if any man in this world could, and that was Dr. Brown-Sequard of France. It was worked up, studied and carefully experimented with by hundreds and thousands of the leading physicians, not only of Germany and France, but of this country as well, and was allowed to drop, until a doctor in a small village in Missouri got a flock of goats and began experimenting on it and started a company in Chicago which is exploiting its use in the most satisfactory way possible—to them.

The doctor is evidently not enthusiastic. The paper was a good one, not written at all as a stock-holder of the concern, because he does not give any of the motives by which it is sent around to the various doctors. He doesn't mention the fact that they charge so much for the "good will" of the concern, or so much for a month's treatment. Expensive thing to use. It costs about thirty dollars a month to buy the stuff, and you have to charge a little more, I suppose, to inject it into the individual. They have a whole list of advertised cures. We know well enough that any patent medicine has just as good and as many cures to its name as the goat's lymph has. The doctor said it was a good hypnotic. I believe that. I believe in the hypno-

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tism of it exactly, and I believe that the good effects of it due to the particularly careful dietary and the careful method of treatment that is used in conjunction with these injections. I object entirely to the method in which that goat lymph is being exploited among the profession, and I, as far as I am personally concerned, don't believe a thing in it. I don't believe that the dead spermatozoa have anything to do with the treatment of diseases. The results may be very flattering so far as the testimonials are concerned, but we doctors know what testimonials mean. They simply mean nothing except the fertile imagination of some impressionable individual's brain, under the supposition that the remedy is the cause of the cure or the relief, and who reasons and can only reason, "post hoc, procter hoc."

DR. WALLACE of St. Joseph, said: "I think it is unfortunate that our good friend should introduce a paper of this kind into a scientific body, and I for one gladly uphold what Dr. Macrae said, that this is a theory of the degenerate mind, because when it was taken up by the profession, it was exploded and we might just as well admit in this society a paper on osteopathy as a thing of that kind. and it seems to me the time of the society should not be taken up in a discussion of this kind. I say this with all due respect to the doctor who read the paper, but this is simply my opinion of a matter of this kind."

As Dr. Wallace says, "It is unfortunate" that a paper of this kind should be read in a reputable medical society, and we want to say, that it seems urgent an official censor is evidently necessary in the Louisville Medico-Chirurgical Society, in order to regulate the character of the papers presented before that body of supposedly scientific men. F. P. N.

THE election as Governor, of Richard Yates, in Illinois, means much to progress in wise medical legislation in that State. He is of that type of the young man who believes in high standards of efficiency; he is a friend to progress; a friend to all things that will make better this world in which we live, and he is broad enough to go beyond expediency to do what is right. We believe in him, because we know him as a fellow-citizen and neighbor, and when vicious medical legislation comes up in Illinois it will find its Waterloo at least in his veto, if it has not already been killed in the committees. We congratulate Illinois in selecting such a man, and we congratulate the Governor-elect on this great honor. F.P. N.

Illinois' New Governor.

CONSOLIDATION AGAIN.—There are rumors afloat in the community which indicate that consolidation will soon again reduce the number of our colleges. This time it is the Beaumont Hospital and the Marion-Sims which are concerned. The union of the Missouri and the St. Louis, making the medical department of Washington University, has converted to consolidation those who could not see that the theory was good until it had been demonstrated by experiment. Should the proposed union be effected it would still leave St. Louis with four regular schools; when the number has been reduced to two we will consider that there is no need to agitate further consolidation.

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DR. ROSWELL PARK is medical director of the Pan-American Exposition, which celebrates at Buffalo next May.

THE MEDICAL GAZETTE is to be known hereafter as *The Medical Adviser*. There has been no change in editorial or business management.

DR. ALFRED STENGEL has been appointed on the medical staff of the Pennsylvania Hospital in succession to the late Professor J. M. DaCosta.

MR. H. J. HOWARD, representing Eli Lilly & Co., will be with the St. Louis profession during this winter. Mr. Howard has opened an office at 302 Granite Building for the convenience of those who wish to keep closely in touch with his house.

GOLD MEDAL AWARD.—Advice from Paris announces a gold medal award for "Pluto" water, the product of French Lick Springs, Indiana. Pluto is one of the standard waters of America, and this latest recognition of its merits from a foreign tribunal, will be received with gratification by all Americans.

THE H. K. MULFORD CO. has established a depot in the Benoist Building (room 212), which may be reached by either telephone, Bell Main 823, or Kinlock A 693. The local profession will find this a great convenience. Just at present there is great demand for Mulford's diphtheria antitoxin, and fresh stock will always be obtainable at their office if the druggist is not supplied.

OUR WORLD'S FAIR.—The Louisiana Purchase Exposition, to be held in this city in 1903, has now assumed a definiteness that assures much enthusiasm on the part, not only of Missourians, but of all Americans. The fair is to be a *World's Fair;* it is bound to be a great success; its success depends on *each one of us*. We have none too much time for preparation, and the sooner we get to work the better will America's reputation abroad and the greater will be our own satisfaction with the "greatest show on earth."

THE SOUTHERN.—This name has been for many years a synonym for elegance and refinement, for superb cuisine and for perfect appointments in the hotel line, and this grand old hostelry, in its new and modern habiliment, is worthy of its title, "the leading hotel of St. Louis." Physicians when in convention assembled, have always made this house their headquarters, and its special dinners are always a subject for the highest praise. A visit to the "Southern" will prolong your life, and make you feel that life is indeed worth living.

WARNER'S NEW THERAPEUTIC REFERENCE-BOOK.—This little book contains a vast amount of useful information of a miscellaneous nature which will be found serviceable by the practitioner. So many new features have been added in revision, that the term "new" is used advisedly in the title, it is practically a new book. Those who have known Warner's Therapeutic Reference-Book need not be told that this *new* reference-book is a desideratum, those who have never indulged should convince themselves of its worth at once. It will be sent to physicians who make application to W. R. Warner & Co., Philadelphia.

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The Reviewer's Table.

Books, Reprints, and Instruments for this department, should be sent to the Editors, St. Louis

PROFESSOR CULBRETH'S most complete and accurate work on Materia Medica and Pharmacology has won the deserved honor of a second edition. The book is a marvel of information, clearly and comprehensively presented. This convenient sized volume has been found an excellent text-book and work of reference, as might have been expected from its natural method of presenting its subject, namely, to keep the basal or parental source paramount and to associate in regular order those substances which have a common or allied origin. A rational method, surely, and one best conveying a grasp and recollection of this vast subject. In this new edition, the latest approved remedies, a more detailed statement of the physiological action of the leading drugs, their incompatibilities and synergists, a more comprehensive account of poisons, including combating methods, a treatise on prescription writing, and a number of new illustrations, mark the leading changes that are hoped to merit for the work an increase in popular favor. The volume has always been noted for its exceptionally abundant and accurate illustrations, which number no less than 464 in the new edition.

A MANUAL OF MATERIA MEDICA AND PHARMACOLOGY. Comprising all Organic and Inorganic Drugs, which are and have been official in the United State Pharmacopoeia, together with important Allied Species and Useful Synthetics. For Students of Medicine, Druggists, Pharmacists and Physicians. By David M. R. Culbreth, M. D., Professor of Botany, Materia Medica and Pharmacognosy in the Maryland College of Pharmacy, Baltimore. New (2d) edition. In one octavo volume of 881 pages, with 464 illustrations. Cloth, $4.50 net. Lea Brothers & Co., Publishers, Philadelphia and New York.

IT MAY be said of this distinguished author, that he has made the most thorough study yet published of this disease from the standpoint of surgical pathology, and his conclusions, while in accord with the natural result of such an exhaustive inquiry, are yet at variance with the belief of other eminent surgeons and physicians. However, Deaver has made his point, that appendicitis is a surgical disease, and to the conscientious student his appeal is not in vain. This monograph should be in the hands of every physician, as well as surgeon, and should be read, digested, and with such scientific information for a foundation, it is inevitable that the true position of appendicitis will be among surgical affections, and as such will receive the surgeon's care. Now, surgeon's care does not *always* mean the use of the knife, but what if it does, if life is saved—it does mean the observation from the standpoint of giving relief, permanent and sufficient in the great majority of cases. This book is conservative, though seemingly radical to the uninformed; it is practical, and we believe has a mission greater than even its author has hoped for in solving the much discussed and the unsolved problems of appendicitis.

A TREATISE ON APPENDICITIS.—By John B. Deaver, M. D., Surgeon-in-Chief to the German Hospital, Philadelphia. Second Edition. Thoroughly revised and considerably enlarged. Illustrated with 32 full-page plates. Octavo, $3.50 net. Philadelphia. P. Blakiston's Sons & Co. 1900.

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THE phenomenal success of Saunders' Medical Hand-Atlases is readily understood by all who have seen the series, they surely demonstrate the possibilities of illustration as an aid to the knowledge of disease, and make a post-graduate clinical course possible for those who cannot visit the larger medical centers, so accurate is the design and so life-like the coloring of the illustrations. It has ever been conceded that illustration is especially valuable in works on diseases of the skin, in this regard this volume is superb. The text, while possibly more abbreviated than might seem desirable, is accurate and sufficiently detailed to make the cases reported clear. Used in conjunction with the more elaborted text-books this and all the series will prove vastly valuable.

SAUNDERS' MEDICAL HAND ATLASES. Atlas of Diseases of the Skin, including an Epitome of Pathology and Treatment, by Prof. Franz Mracek, M. D., of Vienna. Authorized translation, edited by Dr. Henry W. Stelwagon, Clinical Professor of Dermatology, Jefferson Medical College, Philadelphia, etc. With 63 colored plates and 36 full-page half-tone illustrations. Cloth, $3.50 net. W. B. Saunders & Company, Philadelphia.

H.

THIS new number among Saunders' Question Compends is a valuable addition to the series. The subject-matter is ably handled, though necessarily condensed the condensation has not been allowed to obscure the facts stated, or to cut off the side lights essential to their intelligibility. As a hand-book in connection with the work of the lecture-room it will largely obviate the taking of notes. It will also be found a helpful preparatory work to the study of pathology. This will be appreciated by physicians as well as by students.

SAUNDERS' POCKET MEDICAL FORMULARY—With an Appendix containing various tables and Emergency Matter of Importance to the Practitioner in his daily work. By Wm. M. Powell, M. D., author of "Essentials of Diseases of Children;" member of the Philadelphia Pathological Society, etc. Sixth edition; thoroughly revised; flexible leather, $2.00 net. Philadelphia, W. B. Saunders & Co., 1900.

THE present edition of this popular formulary is the result of a complete revision and enlargement of that now in the hands of the profession. It has been enlarged by the addition of some two hundred new and valuable formulæ, making it one of the most complete works of its kind. The appendix contains the following matter, all concisely and clearly stated: Posological Table; Formulæ and Doses for Hypodermic Medication; Poisons and their Antidotes; Pelvic and Fetal Measurements; Obstetric Table; Diet List for Various Diseases; Materials and Drugs used in Antiseptic Surgery, Treatment of Asphyxia from Drowning; Surgical Remembrancer; Tables of Incompatibles; Eruptive Fevers; Weights and Measures, etc.

SAUNDERS' QUESTION COMPENDS—ESSENTIALS OF HISTOLOGY. By Louis Leroy, B. S., M. D., Professor of Histology and Pathology in Vanderbilt University; City Bacteriologist to Nashville, Tenn.; Bacteriologist to the State of Tennessee, etc. Arranged with questions following each chapter. 72 illustrations. Cloth, $1.00 net. Philadelphia, W. B. Saunders & Company, 1900.

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DIET LISTS AND SICK-ROOM DIETARY. By Jerome B. Thomas, A. B., M. D., instructor in materia medica Long Island College Hospital; assistant bacteriologist to Hoagland Laboratory. W. B. Saunders, Philadelphia. Price, $1.25 net.

THIS is a very serviceable and practical book. It covers a much neglected field in applied therapeutics, because, say what we will, diet is, or shonld be, of the very first consideration in applied therapeutics. Thomas has compiled carefully these diet lists; they are reliable, and are based on the scientific consideration of the needs of the patient. The diet lists are detachable and are ready for use. They cover diet in albuminuria, anemia and debility, constipation, diabetes, diarrhea, dyspepsia, fevers, lithemia, obesity, tuberculosis, etc. Formulas for invalids' diet and general rules for giving food, etc., by rectum. Such lists are valuable, and every physician surely recognizes their need. N.

A TEXT BOOK UPON THE PATHOGENIC BACTERIA. By Joseph McFarland, M. D., professor of pathology in the Medico-Chirurgical College, Philadelphia; pathologist to the Medico-Chirurgical Hospital, Philadelphia, etc. W. B. Saunders & Co., Philadelphia. Third edition, revised and enlarged. Price, $3.25.

SAUNDERS has enlarged this edition, which, too, has been revised by the author. It is a good working guide in the study of pathogenic bacteria, and one of especial service to students. The established practitioner, however, needs this work to keep him familiar with this rapidly developing department of medicine. Every physician sooner or later, if he has any progressive spirit within him, will become a believer in the role that bacteria play in disease. If they read and study McFarland, who has fully and faithfully given the life history of bacteria and the lesions produced by them they will be followers of the modern spirit of laboratory investigation. F. P. N.

A MANUAL OF PERSONAL HYGIENE. Edited by Walter M. Pyle, A. M., M. D. Price, $1.50. Philadelphia; W. B. Saunders & Co. 1900.

THIS is an elaborate work, even though small. It is the best book of its kind yet published. Pyle has carefully edited the book, which is the product of himself and six collaborators. The writers are C. G Stockton, who discusses the hygiene of digestion; Fox, who considers the skin and its appendages; Ingals, who tells of the care of vocal and respiratory organs; Randall, who classically almost tells the layman about earache and other disorders of the ear; Pyle, who considers the eye thoroughly; Courtney, who wanders into the by-paths of heredity and education, while elaborating the hygiene of the brain and nervous system; and Stewart, the eminent physiologist of Cleveland, who considers muscular training from the physiological standpoint. We congratulate Pyle on this very timely and well presented manual. He has not wandered away from his text, nor endeavored to make a manual too popular with the layman, so that it would in any way "be the Family Physician." F. P. N.

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Original Department.

PAPERS for the Original Department should be in hand one month in advance, and contributed to THE MEDICAL FORTNIGHTLY exclusively. A liberal number of extra copies will be furnished authors, and reprints may be obtained at reasonable rates, if request accompanies the manuscript. Engravings from photographs furnished free.

Contributions, and books for review, should be sent to the Editors, 312 Century Building, St. Louis.

Signature of contributor, for reproduction, should be sent with every article, on a separate slip; use heavy ink, and allow autograph to dry without applying blotter.

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Anesthesia by Spinal Cocainization.

BY CARL E. BLACK, M. D.,

JACKSONVILLE, ILL.

Surgeon to Passavant Memorial Hospital, and Our Savior's Hospital.

Read before the Brainard District Medical Society at Jacksonville, Ill., October 25, 1900.

FOR two months our medical journals have been filled with comments, original articles and editorials relating to the production of general anesthesia for surgical purposes by the injection of a solution of cocaine into the sub-arachnoid space. The surgical mind has always looked forward to anesthesia without unconsciousness as a great advance step which might some day be an accomplished fact. No discoveries have been a greater boon to humanity and given greater facility to surgical advance than Morton's anesthesia by ether and Simpson's anesthesia by chloroform. We must remember that all anesthetics are accompanied by dangers. Any drug, the influence which so completely overcomes the whole economy, must have more or less danger in its application. We can hardly expect to ever have a perfectly safe anesthetic. The discovery of the anesthetic properties of cocain was a great advance in surgery, and permits us to perform many minor operations under its influence with safety, yet the extended use of cocain in large quantities and over large areas has long been known to be very unsafe. In fact cocain is recognized as a treacherous drug, not always effecting patients in the same way, indeed not always effecting the same patient in the same way. Still its use is greatly extending. The eye surgeon could do little without it, and Schleich by his method of infiltration greatly extended its range of usefulness. Yet infiltration anesthesia has some objectionable features. First, it is of short duration. Second, it distends and disturbs the tissues operated on; and third, it has to be repeated in order to prolong the effect.

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Just now, we are startled with the thought that general anesthesia can be produced by the injection of cocain solution into the spinal canal, yet this is by no means a new discovery. As far back as 1885 J. Leonard Corning, of New York, published (*New York Medical Journal*, Vol. 42, page 483) his experiments in local anesthesia. In these first experiments he did not introduce a cocain solution directly into the spinal canal, but injected it into the tissues about the cauda equina. Later, he carried his experiments farther and injected the cocain solution directly into the spinal cord, and demonstrated conclusively that efficient anesthesia without unconsciousness can thus be produced.

His second article was published in the *Medical Record* in 1888 (Vol. 23, page 291).' In his first report published in 1885, Dr. Corning, concluded with the following: "Whether the method will ever find an application as a substitute for etherization in genito-urinary and other branches of surgery further experience alone can show." By the testimony and the observation of what it may do has seemed to me on the whole worth reporting.

Thus we see that Dr. Corning, of New York, deserves full credit for having experimentally and practically demonstrated the anesthetic power of cocain injected into the spinal canal. Just why his valuable observations, which now appear to have been absolutely complete should have been so long overlooked by the surgical world, is difficult to understand. His observations were published in our best and most widely distributed journals, and yet more than five years elapsed before attention was again called to this matter by A. Bier, of Germany.

Bier's experiments seem to have been carried on independently of those of Dr. Corning, and to him much credit is due for calling prominent attention to this as a new method of anesthesia in surgery.

Quicke's method of puncture was used. The needle is kept plugged until the point enters the spinal canal; the plug is then removed and a few drops of spinal fluid are allowed to escape. The syringe is then attached and a dram of a 2 per cent solution of cocain is injected into the spinal canal, after which the needle is withdrawn. Of course this whole procedure must be carried out under the strictest aseptic precautions.

Following Bier's publication in the *Deutsche Zeitschrift fur Chirurgie* in 1889, a number of experimenters and practitioners took the matter up. The experiments of Corning and Bier were quickly confirmed by other observations.

Tuffier (*La Semaine Medicale*, 1899, page 363, May 16, 1900), of Paris, was one of the first surgeons of prominence to bring this method into general use. He reported a large number of cases with almost uniformly good results. He usually makes his injection between the fourth and fifth lumbar vertebra, but gives little preference to exact location, sometimes selecting as high as between the first and second lumbar. For practical purposes, an imaginary line drawn between the crest of the ilia will pass over the center of the fourth lumbar vertebra. From this point it is very easy to locate any space desired. Injection is easiest with the patient sitting on the edge of the table.

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O. Kreis (*Centralblatt fur Gynakalogie*, July 14, 1900) and others have reported the use of spinal anesthesia to relieve or modify the pains of labor.

Dr. Marx, of New York (*Medical News* of August 25, 1900, and *Medical Record* of October 6, 1900), gives the first extensive reports of the application of this method by American surgeons.

Dr. J. B. Murphy, of Chicago, reports a considerable number of operations made under this method of anesthesia. As far as I have been able to become familiar with the reports, only two deaths are reported. Of course compared with ether, two deaths would be a high mortality, yet they may have been due to other causes. By all reports up to the present time the method promises great advance in the treatment of some conditions. All kinds of operations have been performed under spinal anesthesia.

Tuffier claims that any operation on a part below the diaphragm can readily be performed in this way. There are two dangers which frequently suggest themselves as likely to follow this method: First, is the danger from the cocaine itself. We will undoubtedly have cases of cocain poisoning, and some deaths on this account.

The second, and possibly greatest danger if the method should become general in its application, is from infection. Any one who is not familiar with strict aseptic technique should not attempt spinal cocainization. The puncture must be made with the same care to asepsis as would be exercised in making an abdominal operation.

In the *Medical Record* (October 20th, 1900) J. Leonard Corning, of New York, gives a very interesting article on this subject, in which he devotes special attention to the technique. As this is the best I have seen, I quote freely from his article, as follows:

"(1) The needle may be from three and a half to four inches in length. It should be fine, but not over-tempered. The bevel of the point should be short, so that the needle will not require to penetrate the membranes very far, in order to insure the deposit of the solution within them.

The needle may be made of gold or platina, which metals being bendable are not liable to break, even when the calibre is small.

There should be a small steel nut, transfixed by the needle, sliding freely upon it, and fixable at any point of its (the needle's) length by the aid of a small set screw.

When the needle is thrust in, and a few drops of the cerebro-spinal fluid emerge, thus nut is slid down till its lower aspect rests upon the skin. The nut is then fixed in place by tightening the screw, and a further entrance of the needle into the spinal canal effectually prevented.

(2) A syringe of glass, graduated up to thirty minims or more, and provided with an asbestos packing, is the best, because it is so easily and thoroughly sterilized.

(3) I prefer to employ a short, delicate trocar (see Fig. 1) half an inch in length, to penetrate the thick skin of the back, subsequently passing the needle through the opening of the trocar. This permits of the use of a very fine needle. Many of the needles recently employed by others are

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too large. The comparatively large puncture which they make in the membranes allows too much of the cerebro-spinal fluid impregnated with the anesthetic to flow out after withdrawal of the needle. Moreover, the bevel at the point of the needle is often too long, necessitating, as has been said, too great a penetration beyond the membrane.

(4) As to the operator: He who undertakes to penetrate the membranes of the cord should go about it with clean hands; an application of soap and water, followed by washing with alcohol, and a dip in a solution of bichloride solution (1 : 2000), will suffice to insure the necessary asepsis.

(5) As to the patient: The back should be scrubbed with (a) green soap and water; (b) bichloride solution 1 : 2000; (c) ether; (d) alcohol.

(6) Sterilization of syringe: Cylinder piston (withdrawn from cylinder), and needle should be boiled before used; and, thereafter, the hot water should be forced through the needle several times.

(7) The anesthetic: At present cocaine (the hydrochlorate) gives the most satisfaction. A 2 per cent solution seems to be the favorite, though I myself have tried many other strengths.

For the purpose of sterilization many are accustomed to boil the solution, which may be conveniently done in a test tube over an alcohol lamp. To facilitate the filling of the syringe, the solution may be poured into a watch-glass, previously well sterilized by boiling. Care should be taken to expel all air from the syringe before used. The solution should be allowed to cool before being injected.

(8) To make the injection: If possible the patient should be placed in a sitting posture, inclining in a forward direction, so as to bend the spine, and thereby cause some slight separation of the vertebræ.

I have made the injection at various points along the lumbar and even the lower dorsal spine. At present there seems to be in some quarters a predilection for the space between the spinous processes of the fourth and fifth lumbar vertebræ. It is, perhaps, a little easier to enter the canal at this point; but whether the deposit of the solution higher up and nearer the cord proper is not better practice from a physiological point of view is, to my mind, still an open question. Certainly, to puncture, as I did years ago, between the second and third lumbar vertebræ would cause the anesthetic to arrive at the cord more quickly and in a more concentrated condition than when introduced lower down. As a consequence, anesthesia is more rapidly induced than when the injection is made lower down. If it be decided to inject at this point, the relatively profound depression between the first sacral and fifth lumbar may serve as a convenient landmark. Thence the spinous processes may be counted backward till the spine of the third lumbar vertebra is reached. This should be marked with india ink or a blue crayon. Just anterior to this point, and a little to the right of the ligament, the needle is introduced at something of an angle. I advise those who contemplate practicing spinal anesthesia to take a look at the skeleton, especially the relations of the lumbar vertebræ. An intelligent glance of that sort is worth many words.

The needle should be introduced slowly, the direction being slightly from without inward, and from below upward. Any obstruction of its

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lumen may, of course, be cleared with the stylet. The outflow of a few drops of cerebro-spinal fluid will tell of the penetration of the membranes. The syringe may now be attached, and the injection made."

On account of the difficulty in the sterilization of cocaine, it has been suggested recently that eucaine be substituted. Eucaine B. can be thoroughly sterilized by heat without destroying its anesthetic properties, while cocaine is rendered useless by overheating.

So far I have only taken one opportunity to apply spinal anesthesia. Through the courtesy of Dr. H. C. Campbell I used this method a few days ago. The doctor had a patient requiring a very long incision in the thigh to relieve extensive abscesses and tissue necrosis; also requiring a thorough curetting of a large area extending down between the muscles. I would simply say, that ten minutes after the cocain solution was introduced into the spinal canal, the operation was begun, and concluded without pain to the patient, although it involved an extent of tissue which ordinarily would have given a great deal of pain, and would have been impossible to accomplish without some form of anesthesia.

I have been watching the literature on the subject with a great deal of interest, and feel sure that in the future we will apply spinal anesthesia to a great many cases. I can conceive that in a variety of fractures and other conditions of the lower extremities it will be a great advantage to have the patient anesthetized and at the same time conscious and able to put forth some motive power.

IDOLATRY IN CODE WORSHIP.—Idolatry in code worship is a tendency that seems more and more prevalent. One of the most honored and honorable of American physicians recently protested that consultation with sectarians and stealing patients was more prevalent with some code worshipers (citing the cases of some principal officers of great medical organizations) than with practitioners excluded from the ranks of the faithful. There is, of course, a usefulness in the antiquated code, but we should not forget that zealots are prone to worship the idol rather than the spirit it represents. Idolatry may be as bad as or worse than atheism. Certainly there is no reason for pride on the part of the idolaters, who disobey the spirit of ethics in their practice, and who excuse the most outrageous professional scoundrelism if it happens to be exhibited by the code worshipers. One should set his own household right before lecturing his neighbors. It is a standing disgrace that all reputable regular physicians cannot join our national medical organization because of a silly war of words. All who love our profession more than their "logic," cliqueism, or vanity, will surely try to find a common meeting-ground and a method of uniting upon essentials.—*Phila. Med. Journal.*

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Causes of Blindness in the Illinois School for the Blind.

BY A. L. ADAMS, M. D.,

JACKSONVILLE, ILL.

Oculist and Aurist, Illinois Institution for the Blind, the Deaf and Dumb, Our Savior's Hospital.

Read before the Brainard District Medical Society at Jacksonville, Ill., October 25, 1900.

IN the following tables considering various phases of the causes of blindness, I have utilized the records of 451 pupils in attendance at the Illinois School for the Blind, for varying periods of time, from 1894 to 1900, ranging in age from five to sixty years.

CLASSIFICATION OF THE BLIND ACCORDING TO AGE AT TIME OF EXAMINATION.

AGE.	Males.	Females.	Total.	Per cent.
5 years	3	1	4	.88
6 to 10 years	33	35	88	19.51
11 to 15 years	71	44	115	25.49
16 to 20 years	44	57	101	22.39
21 to 30 years	41	27	68	15.07
31 to 40 years	25	3	28	6.20
41 to 50 years	24	2	26	5.76
51 to 60 years	10	..	10	2.21
Above 60 years	1	..	1	.22
Unknown	8	2	10	2.21
Total	280	171	451	100.00

Blindness is defined as being "destitute of the sense of sight either by natural defect or by deprivation." However, the usual definition would be, that condition in which the sight is so reduced that any occupation requiring the use of the eyes is impracticable.

Pupils are admitted whose "sight is defective to such a degree as to debar him or her from obtaining an education from the public schools." Any applicant desiring entrance should have had an examination by one familiar with diseases and defects of the eye, and had assurance that no material benefit could be had by medical or surgical treatment or by the wearing of glasses.

In reference to the amount of vision of pupils, I have divided them into four classes:

1st. Those who can distinguish large type, as the head of a newspaper, or even smaller type, but from disease of the eyes could or should not read but for a brief time—108.

2d. Those who have quantitative vision, or are able to see the shadows of large objects and not better than m-L—44.

3d. Those having mere perception of light—163.

4th. Those absolutely blind—136.

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There were several pupils who said they were in an intense bright light day and night—this is probably caused by irritation of the optic nerve or the brain at the origin of the same.

Following the classification of Magnus I have endeavored to study the development of blindness, by dividing them into two classes:

			Per cent.
1st. Congenital		76	16.81
2d. Acquired.	1. Blindness	70	15.52
	2. Blindness from primary disease of the eyes	234	51.88
	3. Blindness from diseases of the eye following general disease of the body	57	12.57
Undetermined		14	3.10

CONGENITAL.

		Per cent.
Anophthalmus	½	1.77
Microphthalmus	7½	
Buphthalmus	7	1.55
Atrophy of optic nerve	14	3.10
Retinitis pigmentosa	5	1.10
Choroiditis and choroidio-retinitis	8	1.77
Kerato-conus	3	.66
Keratitis	1	.22
Albinismus	2	.44
Cataracts complicata congen	28	6.20
	76	16.81+

It has been very difficult to determine just which ones should be placed in this subdivision, from lack of history. It is quite possible that the cases of choroiditis and optic nerve atrophy should be placed elsewhere, as the disease may have developed in early infancy.

It will be noticed that congenital cataract has the largest number.

Among malformations we have seven persons with congenitally enlarged eyes, and seven with congenitally small eyes, and one person with one eye absent from birth and with one about the size of a pea.

In the U. S. Census of 1890 the congenitally blind reported 38.7 per cent had blind relatives, while those whose blindness was acquired reported but 19.25 per cent had blind relatives. This was from a total of 12,498 who responded.

BLINDNESS DUE TO IDIOPATHIC DISEASES OF THE EYES.

			Per cent.	
Blennorrhea neonatorum	78		17.25	
Blennorrhea gonorrhoica	9		1.99	
Trachoma	41	143	9.09	31.65
Conjunctivitis diphtheritica	2		.44	
Conj. disease, undetermined	13		2.88	

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Disease of cornea	20	3.43
Iritis	6	1.33
Irido choroiditis	2	44
Choroiditis	9	1.99
Detachment of the retina	7	1.55
Myopia	1	.22
Atrophy of optic nerve	35	7.75
Glaucoma	7	1.55
Cataract	4	.88
	234	51.88

From this table it is readily seen that one-third of this number are blind from disease of the conjunctiva, and of the 143 so affected 78, or over half, are blind from the ravages of the ophthalmia of infants. As prompt and skilful treatment usually results in the cure of these cases, it is fair to assume that nearly all of this class are avoidable, and the amount of blindness from this cause should be reduced to less than one per cent.

Diseases of the conjunctiva can be communicated by contact with any source of infection, viz., towels, wash basins, clothes, etc. By careful personal hygiene disease of the eyes from this cause can be removed.

Atrophy of the optic nerve was present in seven per cent of the cases. The histories are so meager that little can be made out as to its cause.

BLINDNESS DUE TO GENERAL DISEASES.

		Per cent.
Bilious fever	1	.22
La grippe	3	.66
Spotted fever	1	.22
Fever	2	.14
Variola	9	1.99
Typhoid	6	1.33
Scrofula	3	.66
Scarlatina	8	1.77
Rubeola	12	2.64
Brain and its membranes	12	2.64
	57	12.57+

The cases here tabulated are those where a direct history of the disease was certain to the pupil. It is quite probable that many from table 4 would be placed here were the whole history obtainable.

BLINDNESS FROM INJURIES.

		Per cent.
Injuries of eye	24	5.32
Injuries of head	6	1.34
Traumatic ophthalmia sympathetica	40	8.86
	70	15.52

The large percentage here shown makes this table of especial interest.

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Injuries to the eyes directly resulting in blindness, because both eyes were injured, or because sight had previously been lost from other causes in twenty-four instances as follows:

INJURIES OF EYE.

Caustics	4	Blow from nail	1
Kicked by horse	2	Foreign body	4
Scissors, sticks, etc	2	Explosions	8
Unknown	1	Cut by wire	1
Blow from fist	1	Total	24

Those described as injuries of the head, six in number, had no primary involvement of the eyes—one boy was struck on the temple with the end of a rope, which resulted in blindness at end of a week. In two there was no history. In three the injury was by a bullet. In one case causing detachment of retina in one eye, and resulting in a degeneration of the other eye-ball. In two cases the bullet either directly cut off the optic nerves where they cross or caused pressure to be made on them, resulting in their atrophy of them.

INJURIES OF HEAD.

Bullet wound	3
Unknown	2
Blow on temple	1
	6

This number taken with the 40 blind from sympathetic ophthalmia makes a total of 70 or 15 per cent in which an injury was the starting point of the disease of the eyes.

Sympathetic ophthalmia is a term applied to the disease which ensues in an eye, whose fellow has been the seat of an injury or disease previously, and where no other cause can be found for the disease. excepting the injury or disease in the injured or first eye involved. There were 40 such pupils, in 35 of whom the cause of original injury in the fellow eye was known, as follows:

SYMPATHETIC OPHTHALMIA—CAUSE.

	Left.	Right.	Total.
Struck by stone, coal, snowball, etc	4	2	6
Foreign bodies	3	3	6
Explosions	..	3	3
Cut by glass	4	2	6
Cut by wire	1	..	1
Hot iron	1	..	1
Scissors, sticks, etc	4	3	7
Toy gun	..	1	1
Top	1	1	2
Cut by knife	..	2	2
Unknown	3	2	5
Total	21	19	40

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TIME OF INVOLVEMENT OF THE SECOND EYE.

1 month	1	4 years	1
2 months	2	6 years	2
3 months	3	7 years	1
4 months	3	8 years	1
6 months	2	10 years	1
1 year	3	12 years	1
2 years	1	19 years	1
2½ years	1	Time unknown	15
3 years	1		40

Of the twenty-five where the time was known, in 14 instances the second eye was involved during the first year.

In the whole range of surgery there is no question more fully agreed upon than the injurious effect frequently excited by an injured eye upon its fellow, and no treatment more clearly indicated than the removal of the injured eye in such cases.

In considering the causes as here set forth, I wish to especially call your attention to some of those usually considered as preventable, viz.:

Ophthalmia neonatorum	78
Trachoma	41
Traumatic sympathetic ophthalmia	40
	159

or 30 per cent of the entire number. Durr in 1885 found among the pupils in the blind asylum at Hanover that in 46 per cent the blindness was unavoidable; in 14 per cent it was questionable as to its avoidableness, and in 40 per cent it was certainly avoidable.

Hasket Derby, in Boston, found among 183 pupils examined, there were 50 cases, or 27 per cent of avoidable blindness. These were 34 cases of ophthalmia neonatorum, 4 of trachoma, and 12 of sympathetic ophthalmia.

It is readily seen that a large proportion of cases of blindness is avoidable, and by a better knowledge of the pathology and treatment of eye diseases we can reasonably expect to lessen the proportion of blind to the total of population.

This has been done, as shown by the census in various countries.

In the United States in

1880 there were 976 blind to the 1,000,000.
1890 there were 808 blind to the 1,000,000.

In England and Wales there was a proportionate decrease.

1881 there were 879 blind to the 1,000,000.
1891 " 809 " " 1,000,000.

In Prussia.

1871 " 932 " " 1,000,000.
1880 " 831 " " 1,000,000.

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In Holland.					
1864	"	600	"	"	1,000,000.
1889	"	440	"	"	1,000,000.
In Austria.					
1880	"	940	"	"	1,000,000.
1890	"	810	"	"	1,000,000.
In Italy.					
1861	"	952	"	"	1,000,000.
1871	"	1049	"	"	1,000,000.
1881	"	761	"	"	1,000,000.

This diminution in the proportion of blind people to the total of population can be accounted for by the more general use of antiseptics, especially in the care of cases of ophthalmia neonatorum, the diminution in the number of cases of small-pox which frequently had eye complications, by enforced vaccination, and to the general improvement in our knowledge and methods of the treatment of diseases of the eye.

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Hockenhull Building.

MEDICAL INSPECTION IN THE SCHOOLS.—The record of the work accomplished by the medical inspectors in preventing the spread of contagious diseases in the Chicago public schools should have greater weight in determining the action of the board with reference to continuing of the system than any arguments that may be advanced along the line of retrenchment or economy. The value of the work to the whole community should also outweigh any objections from parents who may have suffered from personal inconvenience from the inspection. A statement of the work accomplished by the medical inspectors show that during three and a half months of the last school year 76,000 examinations were made and 4,539 cases of contagious diseases were discovered and excluded from the schools. Since September 17th of the present year 7,249 examinations have been made and 510 contagious cases have been excluded. The argument of economy cannot have much force against such a showing of preventive efficiency as this. If the medical inspection system has kept the schools from spreading epidemics it is worth many hundred times the cost of its maintenance. Indeed it would be difficult to calculate the money value of such a service. The fact is the medical inspection system should not be disturbed under any pretext whatever. Its cost is trifling compared to the benefits that accrue to the community through the inspection. It would be a very short-sighted policy to cut off this safeguard against epidemics in the schools on the score of economy, while large sums are being expended for the nonessential of a common school education. Medical inspection in the public schools of a city of this size is absolutely essential as a measure of public safety.—*Chicago Times-Herald.*

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Report on Microscopy—Malaria.

BY S. E. MUNSON, M. D.,

SPRINGFIELD, ILL.

Read before the Brainard District Medical Society at Jacksonville, Ill., October 25, 1900.

THREE varieties of the plusmodium malaria have been described, namely, the tertian, quartan, and estivo-autumnal parasites. The three varieties differ from each other in a number of a ways. The chief differences are the length of the cycle of development; the size of the full grown organisms; the difference in the refractibility of the organisms; the quantity, size and color of the pigment-granules; the degree of ameboid movement, and the number and shape of the segments into which the full-grown organisms divide. In the earliest stage the varieties of organisms cannot be distinguished from each other.

The tertian parasite completes its cycle of development in about forty-eight hours; when it has attained its fullest growth it almost fills the corpuscle, which has become larger than normal. This organism is more refractive than either of the other two. The pigment-granules are more numerous, finer, and more reddish-brown in color; the ameboid movements are much more active; the segments are more irregular in shape and more numerous than those of the quartan parasite, varying from twelve to twenty in number.

The quartan appears to complete its cycle of development in from sixty-four to seventy-two hours. The full-grown organism does not fill completely the corpuscle, and the latter is not increased in size. The organism is more refractive than the tertian parasite. The pigment-granules are fewer in number, coarser, and have a darker red color. The ameboid movements are slower; the segments are more symmetrical and less numerous than those of the tertian parasite, varying from six to twelve in number, segmenting organisms are more numerous in the peripheral circulation than in the case of the tertian parasite.

The estivo-autumnal parasite cannot be studied so thoroughly in the peripheral circulation, because the latter development and segmentation take place in the internal organs. The cycle of development is not definitely settled, but is about twenty-four hours. The full-grown organ is smaller than the tertian, and the corpuscle which contains it is often smaller than normal, and more or less distorted, crenated appearance. After the fever has lasted about a week crescent-shaped bodies make their appearance. These bodies are not a result of segmentation, but appear to be a further development of the normal hyaline bodies. They contain granules of coarse pigment in the center.

SOME OF THE METHODS USED IN STAINING THE PHASMODIA.

(a) The fixed cover glass is stained from one to two minutes in a concentrated aqueous solution of methylene blue. This staining solution should be filtered before using. The specimen is thoroughly washed in

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water and mounted in Canada balsam. This stains the organism and the nuclei of the white corpuscle blue. The red corpuscle is unstained.

(b) A good contrast stain can be obtained with eosin and methylene blue. The fixed specimens are stained for from five to ten minutes in a ½ per cent solution of eosin with 60 per cent alcohol washed in water, dried, placed in a concentrated aqueous solution of methylene blue for thirty seconds to one minute, washed, dried and mounted in balsam. The red blood corpuscles are stained a bright red, the nuclei of the white corpuscle and the malarial organism blue.

(c) Other contrast stains used with eosin are Loeffler's solution of methylene blue and Dellafield's hemotoxylin, staining from two to three minutes. This stains the organism blue.

(d) Erlich's tripple stain is probably one of the best for this purpose; with this the specimen is only stained one-half to one minute, dried and mounted. This stains the red blood corpuscles a copper color. The neutrophiles and malaria organisms a greenish blue.

(e) Dr. Lazear, U. S. A., Havana, Cuba, in a paper read before the American Medical Association at Atlantic City in June, since died of yellow fever, claimed the method of most value was that of Romanowsky. Its special merit is that it brings out the nuclear material or chromatin distinctly and in a color peculiar to itself.

This method is as follows: A saturated aqueous solution of methylene-blue and a 1 per cent aqueous solution of eosin are kept separately. The older the methylene-blue solution the better the results. The specimen is heated as before, not less than thirty minutes.

The staining mixture is made just before it is to be used. To one part of the filtered methylene-blue solution are added about two parts of the eosin solution. This mixture is carefully stirred with a glass rod, but not filtered, and poured into a watch glass. The cover glass preparations are allowed to float upon the top of the fluid with the blood surface down. The specimens are covered by another inverted glass, and the whole by an inverted cylinder, which is moistened on the inside. Good specimens are obtained in one-half to three hours. Three colors are thus obtained. The red corpuscles stained red by the eosin, the malarial parasites a prussian blue by the methylene-blue, and the nuclear chromatin a violet color.

AT a centenary celebration of the Royal College of Surgeons, which was held in London on July 26, Drs. W. W. Keen, of Philadelphia, and R. F. Weir, of New York, were given diplomas of honorary fellowship in the college.

PUBLIC BATHS.—One million nine hundred and fifty thousand bathers availed themselves of the privileges of Boston's public baths during June, July and August last. St. Louis, though a larger city and with the Mississippi at her door, gives the public no such opportunity.

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Report of a Case of Brain Tumor.

BY E. L. CROUCH, M. D.,

JACKSONVILLE, ILL.

Read before the Brainard District Medical Society at Jacksonville, Ill., October 25, 1900.

J. N. R. was admitted to the Illinois Central Hospital for the Insane January 8, 1900. Age 30. Native of Illinois; married; common school education; railroad section laborer. Mother's sister and maternal aunt were insane.

Patient was a normal child; no serious diseases or injury until at the age of seventeen was overcome by heat; following this was unbalanced mentally, and at intervals for fourteen years would complain of pain in the head, and talk irrationally at times. Attacks came on about once a month until eight years ago, when they entirely ceased, and when he was in fair health up to the beginning of the present attack, which was in October, 1899. Was a moderate drinker. No history of venereal disease.

At the time of his admission to the hospital, patient was fairly well nourished. Digestion fair; tongue coated; bowels constipated; lungs were normal; respiration 20. Heart was irritable and weak; pulse 100, irregular; no evidence of organic lesion. Capillary circulation poor. Was very nervous. Slight muscular tremor; twitching of muscles of face. Muscular co-ordination impaired. Muscular power of right arm and leg impaired; also partial anesthesia of right arm and leg. Marked unsteadiness in the upright posture; at times the body would sway like that of a drunken man, with a tendency to fall forward. Patellar reflexes exaggerated—right arm more marked. Hearing was impaired. Vision impaired, left hemianopia. Could neither read nor write; he claimed on account of impaired vision. There was a peculiar slowness with difficult articulation. Complained of constant occipital headache, with acute exacerbations. Had frequent attacks of cerebral vomiting, which would last from six to twenty-four hours, and would be followed by a period of stupor, at times complete coma, which would last from twenty-four to forty-eight hours.

The principal psychical manifestations were loss of memory, depression, loss of emotional control; also hysterical manifestations. Most of the time when spoken to, would cry until he could not carry on a conversation.

Diagnosis, cerebral tumor of left occipito-parietal region. He gradually grew worse, and the last six weeks was confined to his bed, during which time had frequent attacks of cerebral vomiting. Headache became more aggravated with gradually increasing coma. There was an elevation of temperature as high as 103° F. for six days previous to his death, which occurred at 9:15 P. M. October 4, 1900.

Autopsy was begun at 10:30 P. M. of same date. The scalp was reflected in the usual manner; nothing abnormal noticed about scalp or external surface of skull; skull cap removed; no abnormal adhesions between skull and dura. There was a swelling in the left occipito-parietal region. Upon removal of dura, it was found to be very much thickened in

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this region and firmly adhered just behind occipito-parietal fissure; pia mater covering left occipito and posterior part of parietal lobe was thickened and murky; pial spaces and sulci were filled with a sero-purulent fluid. Within the left occipital lobe and cuneus was a sarcomatous growth, partially encapsulated, immediately surrounding which was a space filled with detritis, principally broken down brain tissue. The only place where the growth reached the surface was at the point of adhesion with the dura. A large part of the cerebral tissue of the occipital lobe and cuneus was necrosed. The parietal lobe was anemic and softened. Necrosis of brain tissue was the result of pressure by growth of tumor.

The tumor was a round celled sarcoma of irregular shape, three inches long, two and one-half inches thick, and weighed four ounces. It was finally attached to dura by a broad pedicle.

This is an interesting case, because from what is known of cerebral localization, the local symptoms, viz., impaired vision, homonomous hemiopia, parietal anesthesia and impaired muscular power of right arm and leg, together with other manifestations, enable us to locate the lesion.

Glycerin in Fever Mixture.—The *Clinica Moderna* recommends the following mixture as beneficial in allaying thirst and fever:

℞ Glycerini puri..... ʒviiss
Acidi citrici..... ʒss
Aquæ destil., q. s. ad..... ʒxxv

M. Sig. One to two tablespoonfuls at one dose to allay thirst and fever. —*J. A. M. A.*

Convulsions in Children.—

℞ Moschi..... gr. ii
Chloralis hydratis..... gr. ivss
Camphoræ..... gr. xv
Yolk of egg..... ʒiiss
Aquæ..... ʒiii

M. Sig. As an enema when the child is unable to take treatment by the mouth.—J. Simon: *Med. Rec.*

Hemorrhoids.—The following prescriptions are recommended for the treatment of painful hemorrhoids in the *Agenda Therapeutica* for 1900:

Extract of esculus hippocastanum fluid... 1 ounce
Chloroform..... 1 drachm

Morning and evening at meal-times, ten to fifteen drops of this mixture is to be taken in a glass of wine or a little sweetened water; or instead:

Fluid ext· of esculus hippocastanum.... 6 drachms
Fluid extract of hamamelia..... 2½ drachms
Oil of peppermint..... 2 drops

Morning and evening at meal-times, fifteen drops of this mixture may be taken in wine or sweetened water.—*Therapeutic Gazette.*

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Blood Examination and Diagnosis.

BY B. F. GILLMOR, M. D.,
CRESTON, IOWA.

It is impossible for one appearing before a medical society to pursue any subject to its exhaustion and it is not my intention, or within my ability, to treat my chosen subject in more than a glancing and superficial manner. I simply wish to direct the attention of my busier brothers to certain practical points, lying within the broad fields of my subject, that may possibly have escaped their attention while applying themselves to matters of more immediate importance to the practice of our profession.

Examinations for the malarial parasite and for the blood changes pathognomonic of progressive pernicious anemia, chlorosis and lukemia are important matters that are as familiar to each of us as the practical application of the microscope to the diagnosis of tuberculosis and I shall not rehearse in this paper such points of common knowledge and well established fact, but shall take the chance of making the introductory of my paper greater than its body and confine myself to discussion of points of apparent minor importance and to certain other matters not so well established on the plain of indisputable fact.

From the bacteriology of the blood we derive but little practical advantage. However important it has been to our systems and theories, it is of but slight importance to the clinician, who holds in esteem only such instruments as can be actively applied either in the treatment or diagnosis of disease, and except from the experimental laboratory we derive little benefit from a bacteriological study of the blood.

The red elements have been studied exhaustively by foreign and American observers but only in two or three diseases does an examination of the erythrocytes supply us with a diagnosis, yet in a hundred ways an estimation of the number and quality of the reds may steer us clear of misleading channels and lead us successfully to a diagnosis. The ease with which this may be done is surprising. By using the specific gravity method of hemoglobin, the Daland hematocrit for the number of red corpuscles and a smear preparation for examination of the anatomy of the cells, a satisfactory understanding of the red elements of the blood may be swiftly achieved. The practical utility of such examinations I may illustrate by citation of a case from practice.

An elderly gentleman of perhaps fifty-five years of age complained of loss of appetite, constipation, pain in the left lower quadrant of the abdomen, pain in the back, etc., etc. Urinary examination revealed an excess of uric acid and a

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renal condition that was at least "irritation." Our minds were pretty well settled as to the diagnosis but the patient gave the history of an epithelioma that had been extirpated five years before and in the region of the sigmoid was a large mass, movable, the seat of pain, and the cause, to his own mind, of his present illness. It was not possible to introduce the finger high enough into the rectum to reach the tumor. The patient was pale and apparently quite anemic and the existence of a cachexia was suspected.

The appearance of anemia was deceptive, for the hematocrit revealed four and a half millions of reds. This made it much more probable that the tumor was a fecal acumulation than a cancerous growth, for a carcinoma of its size would have produced, undoubtedly, a grave cachexia and marked numerical decrease in the red cells. With this finding, we turned with much greater confidence to the prescription of anti-rheumatics, diuretics, laxatives and high enemata of warm water. Now, this was a small matter but a great satisfaction.

Except in chlorosis, pernicious anemia and in leukemia, examinations of the erythrocytes have been, until recently, of small assistance to the diagnostician and the aid afforded the practical man, in the fighting ranks of the profession, by scientific investigation into the nature and pathology of the red cells has been limited to an estimation of the gravity of secondary anemias by a blood count alone. But the usefulness of an examination of the erythrocytes has been greatly expanded by recent discovery of qualitative changes induced in the red corpuscles by disease processes.

A diagnosis of early syphilis may be unequivocally confirmed by obtaining the hemoglobin reaction to mercury. This consists of a reduction of from 10 per cent to 20 per cent in the hemoglobin of a syphilitic within twenty-four hours after the administration of a good-sized mucurial injection or inunction. This reduction in the amount of hemoglobin, however, is associated with but a slight decrease in the number is obtainable only during the first stage of syphilis and, unfortunately, is limited in its applicability to confirmation of the diagnosis during the stage of the primary lesion. The subject is an interesting one but, in itself, it contains sufficient matter for a paper and we may pass on to a consideration of other qualitative alterations discernable in the red cells.

The normal red blood corpuscles will stain only with acid dyes but in degenerative conditions its chemistry is so altered that portions of the cell have an affinity for basic and neutral dyes. Such staining is irregular and imparts to the cell a granular appearance and to this condition the name of "granular degeneration" has been applied. It is some time since Maragliano described this condition and attributed it to changes induced in the cell by a toxic blood-plasma, but it was not until recently that granular degenera-

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tion of the erythrocytes had assumed a practical diagnostic importance. The granules, if present, may be demonstrated by straining a smear preparation with methyl-blue, hematoxilin or any other basic dye. That the granules represent a degenerative condition of the cells induced by toxic substances circulating with them in the blood we may infer from the fact that they may be demonstrated in septic conditions, in malaria, advanced carcinoma, in pernicious anemia and in lead-poisoning, in which last condition the toxicity of the blood is by no means theoretical. In lead-poisoning the granules are regularly to be found and in a suspected case of saturnism the diagnosis may be confirmed by a demonstration of their presence. It is in this condition that demonstration of granular degeneration of the erythrocytes is of greatest utility and precision as a diagnostic procedure.

Saturnism has been proven by Grawitz, of Berlin, in workers in lead who were being treated for disease that was apparently not lead intoxication, and in this condition the granules may be demonstrated when no other alteration of the blood can be discovered, showing that the degeneration of the erythrocytes is one of the first steps in the deterioration of the blood, and therefore of great diagnostic utility.

However important and interesting the pathology of the red corpuscles may be, the greatest good may be derived by the diagnostician from directing his attention to the white corpuscles. The defensive role assumed by the leucocytes in disease processes and their more direct participation in the physiological reactions of the economy to deleterious invasion of its normal processes, their complex constitution and diverse forms enable us to detect alterations in the properties and relative proportions of the normal varieties, and the appearance of certain abnormal forms, that are often sufficiently characteristic to make, or to sustain or contradict, a diagnosis.

For instance, the process of suppuration is always accompanied by an increased leucocyte count, and the more acute and inflammatory, and the more progressive the process the higher the count. A leucocyte count of 6,000 to 8,000 would contradict a diagnosis of active pyosalpinx, and a count of 12,000 to 15,000 would be contradictory to a diagnosis of ectopic gestation, unless there had been hemorrhage.

The leucocyte count depends not so much upon pus, and the quantity of it, as upon the degree of inflammation and is more a gauge of the relative activities of invasion and resistance than of the separate activity of either. A small focus of infection with an active reaction of the individual may give a surprising increase in the leucocyte count; while an old purulent collection, indolent and inactive, may be accompanied by no increase in the number of leucocytis. On the other hand, an active and progressive infection

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in an individual of low vitality and feeble resistance may also be accompanied by a low leucocyte count, or an absence of leucocytosis. This relation of the leucocyte count to the relative activities of invasion and resistance affords us a valuable index of the activity of the disease processes in such infectious diseases as are accompanied by a leucocytosis and may be of great service to us in the progrosis of a given case.

In a case of Pneumonia with no great area of consolidation, a good circulation and not much embarrassment of respiration or elevation of temperature and with a moderate leucocytosis, say 15,000 we would argue that the infection was not severe and that the reaction of the individual was good. The progress in such a case would be bright.

In a case with severe infection, with a large area affected, with a high temperature and pulse rate and with other evidences of severe infection and with a high leucocyte count we may infer that the resistance of the patient to the disease is good and that the reaction is active, but the infection is severe and the resistance of the individual to the disease may or may not prove competent. In such a case the prognosis is uncertain.

In a case with severe infection with no leucocytosis or a slight increase only, we may be sure that the resistance of the individual is inefficient. Such cases almost invariable succumb to the disease.

In scarlet fever, diphtheria, acute articular rheumatism, smallpox, erysipelas and appendicitis a leucocytosis is found and in all the number of leucocytes is in direct ratio to the severity and increment of the disease.

In certain other infectious diseases there is no leucocytosis and this may serve to distinguish them from diseases that are accompanied with leucocytosis, which may resemble them clinically, in one stage or another.

Typhoid fever is accompanied with no leucocytosis and this may serve to distinguish it from certain other diseases, with which it may be confounded, such as appendicitis and abscess of the liver. Measles may be distinguished from scarlet fever by the absence of leucocytosis.

In appendicitis, the leucocytyte count is of very great value, both to the diagnostician and surgeon. An acute appendicitis is always accompanied by a leucocytosis, which is proportionate to the severity of the infection and the advance of the inflammatory process. A low leucocyte count may be found in appendicitis with abscess formation where the pus is thoroughly walled off and the process quiescent. In a mild case, the leucocyte count is low, for the infection is mild and the ascendency of the defensive forces of the body easy. In a severe infection and with rapid progress of the disease, associated with a low leucocyte count, the reaction of the individual is feeble and the prognosis therefore grave.

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Suppuration is not essential to the production of a leucocytosis and a decrease in the leucocyte count in a given case might represent a defervescence of the inflammatory process and, where there was no evidence of pus formation, such a decrease might stay the hand of the surgeon.

In so-called cases of "catarrhal appendicitis" (mild infection) the leucocyte count is of great value in determining between surgical interference and expectant treatment.

The general relations of the leucocyte count to the severity of the disease in appendicitis holds true in salpingitis, and an examination of the blood is of no assistance in a differential diagnosis between the two.

Where a simple numerical estimation of the leucocytes is of value in many diseases and surgical conditions, a differential count is of value in many others. In osteomyelitis the marrow-cells or myelocytes are often found in the blood, but in many other cases are absent. The presence of myelocytes will alone serve to distinguish osteomyelitis from ostitis and periostitis, for in all there is a leucocytosis. Tubercular processes, however, are not commonly accompanied with leucocytosis until infection with pyogenic microorganisms has been superimposed upon the tuberculosis.

To illustrate the practical application of such an examination, I shall simply mention the fact that in osteomyelitis the interior of the bone should be opened at the earliest moment and that, where the marrow is not infected, no one could wish to expose it needlessly to infection by incision, and I shall then cite a case from practice and recite the manner of application of a blood examination.

The case was one of what appeared, upon physical examination, to be some form of inflammation of the right femur and abscess of the soft tissues overlying, in the person of a girl of about 12 years of age.

There was a moderate leucocytosis and differential leucocyte count revealed the presence of myelocytes in considerable numbers.

My partner operated and found, after evacuation of the contents of the abscess in the soft tissues, a bone that was white, smooth and covered with a periosteum that was but slightly thickened. Were it not for the presence of the myelocytes in the blood, there would have been some hesitancy in opening the shaft of the bone; but the chisel was applied, and a diseased marrow found. The exigencies of practice have compelled me to abandon this paper still unfinished. I shall seek excuse for its imperfections in the limitation of time and in the expanse of the subject. However limited my manner of treatment has been, the subject is still inexhaustible, and for one instance mentioned by me, of the practical application of blood examinations, twenty may be found by anyone who will apply himself to the subject.

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Society Proceedings.

BRAINARD DISTRICT MEDICAL SOCIETY

Meeting at Jacksonville, Ill., October 25, 1900.

REPORTED ESPECIALLY FOR THE MEDICAL FORTNIGHTLY.

The Society met in Jacksonville at the rooms of the Morgan County Medical Society, October 25. President Lowrie presided. Minutes of previous meeting were read and approved.

Dr. Hurst, Chairman of the Committee on Good of the Profession, reported that there had been delay in completing his committee, and consequently no action had been taken. Dr. A. G. Servoss, of Havana, has consented to serve on the committee. (Later the committee was completed by the addition of Dr. S. E. Munson, of Springfield.)

A letter was read by the Secretary from Dr. Percy of the State Society, urging that the local societies interest themselves in medico-political appointments, and send to the State Society a list of eligibles from their membership.

Dr. Adams stated that the societies at Jacksonville had taken the action requested, and a further discussion on this line was postponed to get the views of a larger number than were present then.

DR. ADAMS presented a paper on "Causes of Blindness in the Illinois School of the Blind." (See page 714 of this issue of the FORTNIGHTLY.)

DISCUSSION.

DR. HURST.—Does the writer in his consideration of gonorrheal ophthalmia regard it as a traumatism in its relation to sympathetic ophthalmia? I have seen cases arise from this cause, and recall one case where the eye unaffected by gonorrhea was only saved by enucleation of the affected eye.

DR. I. NEWCOMER.—Physicians often fail to treat cases easily within the reach of their skill, because they were not taught in college how to deal with them, so the cases either remain untreated till a far more serious condition has developed, or at least must wait to consult a specialist, when prompt relief might be given.

DR. ADAMS.—Any classification of these cases must of necessity be somewhat arbitrary, both because in many cases the history is not definite, and because in others it admits of two equally probable interpretations. The wide variation in the period elapsing before the development of sympathetic ophthalmia is interesting, though a large per cent develop within the first two years.

A brief period remaining before dinner, in the absence of the essayist, the topic, "Placenta Previa" was informally discussed.

DR. I. NEWCOMER.—In discussing a case the advisability of giving an anesthetic to facilitate version had arisen. Had delivered without it in one case, saving the mother but losing the child. It seems possible that had

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an anesthetic been used the chances for the child would have been better. There seems no good reason for withholding this any more than in other cases of version. This case had had a probable diagnosis at four months, and hemorrhage appearing at six months had been met by placing the woman in bed with the foot of the bed raised. At the eighth month, when I was called for the first time, immediate delivery seemed indicated and was performed.

DR. HURST.—With placenta previa it seldom happens that pregnancy will advance to a late stage without hemorrhage, but even if hemorrhage occurs a positive diagnosis is not always easy. Every effort should be made to come to a positive decision, and as soon as that is had no delay should be allowed. If dilatation is sufficient, deliver at once; if not, tampon firmly, watch most carefully and deliver as soon as possible. In the knee-chest position it may be possible in this, as in other conditions, to turn without an anesthetic, as this position leads to relaxation of uterine contractions.

DR. MANNESS.—In cases of central implantation Dr. Hurst is certainly correct. In lateral implantation, if such a diagnosis can be made positive, delay in delivery might be allowed, if the symptoms were not immediately threatening. When hemorrhage occurs during pregnancy we always think of the possibility of placenta previa. An exploration is so hazardous that the diagnosis must often be held in abeyance. If central implantation is positively recognized, the only rational course is to empty the womb at once.

DR. HURST.—Of course it is needful to wait for a positive diagnosis, but when that is made there is not only the risk of hemorrhage to urge to immediate action, but there is great danger of sepsis. The symptoms are often misleading. Saw a case where a discharge like normal menstruation occurred every four weeks throughout the pregnancy. No harm resulted. Ergot was given as a uterine tonic every four weeks, but did not check the discharge.

DR. LOWRIE.—I have now under observation a woman at the seventh month of pregnancy in whom a flow at times in excess of her normal menses occurred regularly up to the fifth month, so I denied that she could be pregnant until I felt the child's motion, I then prescribed ergot and viburnum, since which there has been no return of the hemorrhage.

DR. NORBURY described a case of "Tuberculosis of the Wrist Joint," The history showed a duration of five months. It was originally treated as a sprain. Patient's mother died of tuberculosis, and he had tubercles in his left lung. Rest was advised and the injection of iodoform emulsion was considered. The case was sent to Dr. Murphy, of Chicago, for advice, and he suggested the injection of a 2 per cent emulsion of formalin. This was used and the member put at rest. The apparent deformity is much improved, and there is no suffering. We heard Phelps, of New York, discuss such conditions at the meeting of Mississippi Valley Medical Association at Asheville recently. Phelps doesn't believe in the injections with emulsions. He had found iodoform in substance in the joint years after its use. He

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lays open the joint, washes it out with strong carbolic acid and one minute later with absolute alcohol. He finds three such treatments sufficient to control the inflammation. He then closes the wound, immobilizes the joint and in the case of hip disease even, allows the patient to be about. He thinks the carbolic acid has a special effect through its union with the albumen of the tissues. If the inflammation continues in the case reported, shall open and wash it in this way. The carbolic acid is also being used by Phelps in cases of erysipelas, where he paints the affected area, following this by absolute alcohol, and with such success that the cases are allowed to remain in the surgical wards and no contagion follows.

DISCUSSION.

DR. BOWE.—I saw numerous cases of the use of iodoform emulsion under Senn, but never a case cured or greatly benefited. In primary joint cases the only treatment worthy of consideration is radical surgery. Dissect out the diseased tissue, disinfect thoroughly, and do this repeatedly till all diseased tissues are removed. There is certainly merit in the carbolic acid treatment, but the knife, even the saw, if necessary, is the best.

A visiting M. D. suggested that cataphoric treatment with formaldehyde is very promising. Mechanical applications fail to reach every part. Static electricity will penetrate every fiber. The method is too new as to speak as to final results, but the theory is scientific and reasonable.

DR. HURST.—It is perfectly safe to use carbolic acid full strength. Glycerine will check its action as well as alcohol. Iodoform is an alterative, not a disinfectant. If you want to use it in ether instead of in oil.

DR. I. NEWCOMER.— Cases of slight injuries in patients with a tuberculous tendency should be carefully watched and affected joints put at rest, even by plaster, if need be. So treated many would recover without developing tubercle. After it has developed the knife and the curette are the best medicine, and should be applied till every particle of diseased tissue is removed.

DR. ADAMS.—The pure carbolic acid is one of the best remedies in certain corneal troubles. In corneal ulcer, after curetting, it may be applied with a stick and the cornea bathed afterward with a saturated solution of boric acid.

DR. BOWE.—The best treatment for suppurating glands is to cut them out. Chemical antiseptics are not reliable and will be used less as time tries their results further.

The noon hour having arrived Society adjourned till 1:30 P. M.

Those present during the day were Drs. Adams, Black, Burnham, Crouch, Hairgrove, Hurst, Lowrie, Miller, Munson, I. Newcomer, Norbury, and as visitors, Drs. Clampit, Manness, Cole, Dinsmore, Truax of Chicago, Ziegler, Stacey and Warren.

On convening after dinner Dr. Hurst again presented the subject of the work of his committee, and read the following resolution, based upon that passed by the Morgan County Medical Society at a recent meeting.

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Resolved, That it is the opinion of the members of the Brainard District Medical Society that the medical societies of the State of Illinois should be reorganized on some comprehensive plan which will unite the profession and complete a harmonious organization, which would include all county and district societies, and the State society.

That we believe the success which has attended fraternal organizations is in part, at least, due to their plan of organization ; and, further, that the time has come when medical societies, besides being bodies for the presentation and discussion of scientific topics, must take a more active and practical interest in the material welfare of the profession, as well as an active participation in all measures which are calculated to preserve the good health of the various communities of the State.

Therefore, we would respectfully ask our neighboring county and district societies, as well as the State Society, to consider some practical plan of reorganization, and to take steps to carry it into effect.

Dr. Norbury moved the adoption of the resolution. Several members spoke in discussion of the subject. It was explained that the plan at present in mind of the committee of the State Society is that under which the profession in New York has lately been reorganized, making the local society the basis of membership and having all fees paid to it, so that membership in this also involved membership in the district and State societies. On motion the discussion was closed and the original motion being put was unanimously carried.

DR. MUNSON, for the Committee on Microscopy, reported on "Malaria," presenting illustrative slides. (See page 720 of this number of the FORTNIGHTLY.)

DISCUSSION.

DR. NORBURY.—As a means of differential diagnosis the microscope is of great importance, and all physicians should be familiar with it. Malaria is a malady of importance beyond our former belief. In cases under treatment we may fail to find the parasite, hence it is best to examine the blood at the onset, or when no quinine is being taken.

DR. HURST.—We here ought to know all about malaria. It complicates almost all cases of illness of more than a week's duration. We sometimes find it a factor in cases with subnormal temperature. Can the essayist explain the occurrence of a seventh day paroxysm? A farmer, industrious, sober, sensible and advanced in years, had a paroxysm every Sunday, and only on Sunday, for over a year. When I first examined him his temperature was 102°. Gave quinine enough to interrupt the paroxysm every day for a week, then every second or third day for a month. He had no recurrence. The condition of the corpuscles affected seem to explain the tendency to hemorrhages. Clinical experience would indicate that there must be more than one variety of the plasmodium.

DR. MUNSON.—The best time to give quinine is just after segmentation, when the parasites are free in the blood. The chill takes place a

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this time. A few large doses then will do more good than numerous smaller ones distributed over the twenty-four hours. We find the more obstinate and irregular forms in persons from the South, where the malarial influence is stronger than here.

DR. MANNESS.—A peculiar case had tingling and paralysis of the right side for a brief time every second day. He would fall and lose consciousness. Was not at all a hysterical subject. In an hour he was all right again. Quinine stopped the difficulty.

DR. NORBURY.—Dr. Brown, of Decatur, speaks of cases of infantile paralysis of this nature. Even meningitis may be simulated.

DR. HURST.—During the civil war, while we were lying in an intensely malarial district near Memphis several cases of complete, periodical amaurosis occurred among the soldiers.

DR. MUNSON.—Evidence is accumulating that the malarial patient is dangerous to his neighbors. If a mosquito bites such a patient it may carry the germs to others. The relation of the mosquito to the disease is not fully determined, though it is apparent that in many cases at any rate there is some relation.

DR. CARL E. BLACK presented a paper on "Cocainization of the Spinal Cord." (See page 709 of this issue of the FORTNIGHTLY.)

DISCUSSION.

DR. HAIRGROVE.—It is a misfortune that the formula for this method has been given to the general profession. It is a measure attended with grave risks in the most skillful hands, and with the carelessness as to asepsis so common in the profession, we are nearly certain to have some terrible accidents. When using chloroform and similar anesthetics the administration can be stopped when untoward symptoms appear; in this method the mischief is done beyond withdrawal when the injection is made. I have seen a great number of cases in Paris. At times there were marked constitutional symptoms, almost collapse, as well as anesthesia. Asepsis is imperative. A lack here would probably entail horrible consequences, hence the measure should not be in the hands of the general profession. Collapse sometimes follows the application of small quantities of cocaine to the nasal lining where it is to some extent under control.

DR. NORBURY.—At the recent meeting at Asheville, N. C., this subject was discussed. The question of paramount importance is sterilization. Anderson and Moyer, of Chicago, have experimented with eucaine B, and find it preferable to cocaine, since it is capable of complete and certain sterilization. Anderson had lost one case with cocaine, the patient dying during the night following the operation. The spinal fluid is such an excellent culture medium that there is great danger from this source. We have reports of grave disturbances of the circulation with severe, continuous, occipital headache.

DR. BLACK.—Asepsis is, of course, the great consideration in every case. Corning's method of introducing a small trocar through the skin has

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the advantage that it lessens the risk of carrying infection inward from the skin, as well as allows a finer needle to be used.

DR. CROUCH showed a fine specimen of "Brain Tumor," and reported the case. (See page 722 of this issue of the FORTNIGHTLY.)

DISCUSSION.

DR. HAIRGROVE.—The case is of peculiar interest from the size of the tumor and the hereditary predisposition.

DR. NORBURY.—The case illustrates the value of cerebral localization. It was probably never operable. The optic nerve tract may have been compressed as far as the chiasm.

In reply to a question, Dr. Crouch stated that only symptomatic treatment was used, the case promising no possibility of cure.

On motion, bills for postage, a new record book and flowers sent to the funeral of our late associate, Dr. Helen Duncan, of Jacksonville, were allowed.

On motion, society adjourned.

KATHERINE MILLER, Secretary.

An Antiseptic Varnish to Replace Collodion.—The *Journal des Praticiens* attributes the following to Nicaise:

℞ Thymol..... 22½ grains
Balsam of tolu..... 75 grains
Powdered shellac..... 900 grains
Alcohol at 90°..... 750 grains
Ether.....1500 grains
M.—*N. Y. Med. Jour.*

Pleurisy.—Act most promptly in pleurisies with serous effusion of recent origin or of long standing, but they are efficient in simple dry pleurisy, and often act favorably in secondary pleurisy. An agreeable salicylic mixture:

℞ Potassii acetatis..... ʒi-ii
Acidi salicylici..... ʒss
Syrupi limoniis..... ʒij
Elix. lactopeptine..... ʒviij
Sig.: One tablespoonful every three hours.

Endocarditis Associated with Rheumatic Fever.—

℞ Potass. bicarb..... gr. xx
Tinct. hyoscyam..... m xx
Aq. camphor..... ʒj
Aq. destil, q. s. ad..... ʒj—M.

℞ Quinin. sulph..... gr. j
Ammon. carb..... gr. ij
Potass. bicarb..... gr. xx
Tragacanth..... gr. iv
Aq. chloroform..... ʒiv
Aq. destil., q. s. ad..... ʒj
M. Sig.: To be taken three times a day or oftener.—*Med. Bulletin.*

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(DR. HINKLE.)

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Aloin	aa ¼ gr.	Strychnin	1-60 gr.
Podophyllin	1-6 gr	Gingerine	⅛ gr.

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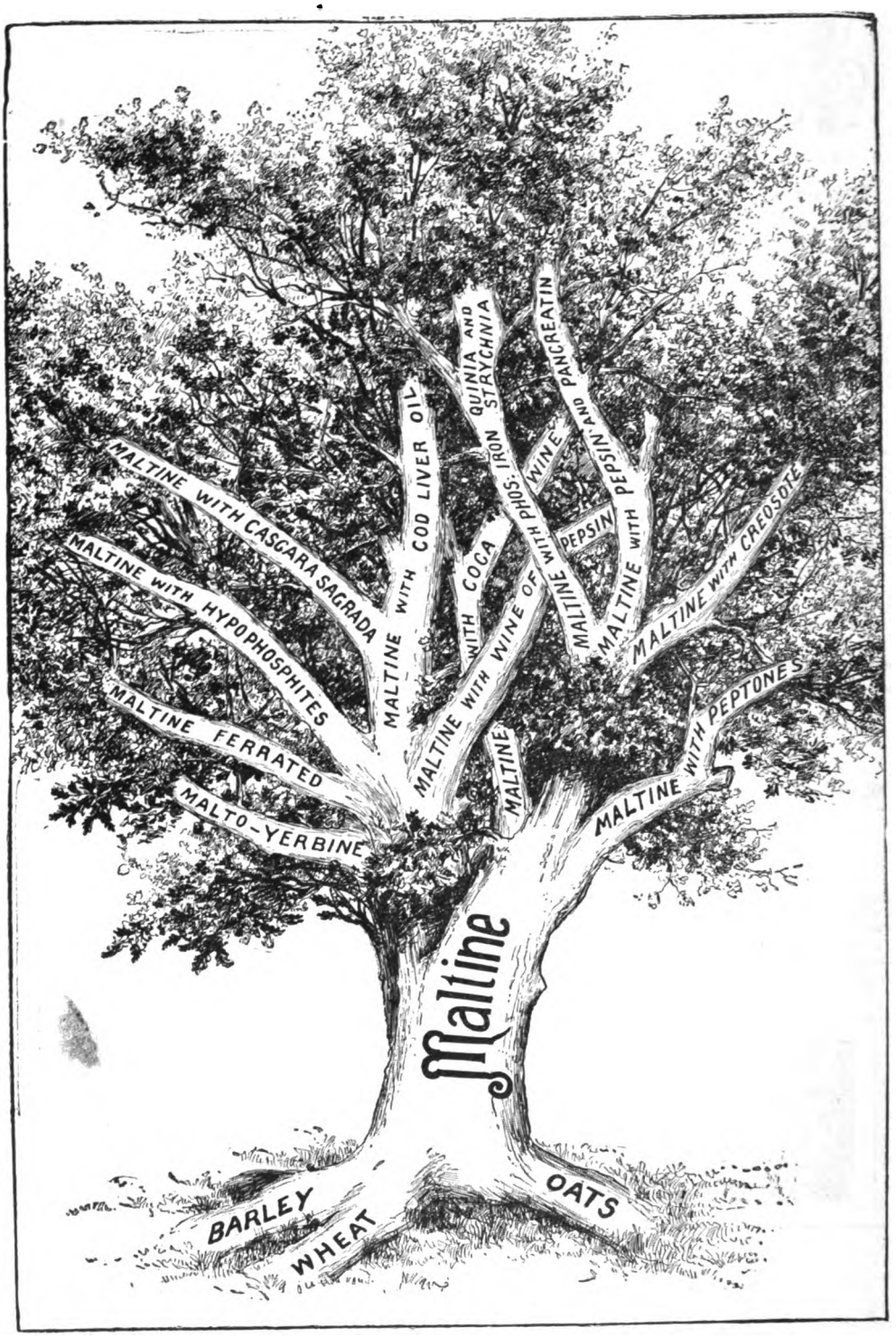

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PRACTICAL THERAPEUTICS.

"THERAPEUTIC SUGGESTIONS.—Pyuria which is always present in chronic catarrhal cystitis in the form of muco-pus or coherent masses of gelatinous, ropy matter, can be relieved by the use of cystogen in five grain doses four times a day.

TREATMENT DURING LA GRIPPE.—During la grippe epidemics most cases have been especially characterized by disturbance of the gastro-intestinal tract and after the patient has recovered from the dangerous effects of the disease, he is often left in a severe dyspeptic condition. In such cases physicians find Allouez Magnesia Water of great value as its curative action on the digestive organs is very prompt and causes no disturbance or reaction. It is highly agreeable to the palate and posesses the rare ability to "stay down" even when the lightest nourishment taken provokes the sensitive stomach.

Since their introduction the Hypophosphites have firmly maintained their hold on porfessional and popular confidence and today are prescribed alone and in combination by more physicians than any other remedy. This is strong testimony to their superior worth, because of their fine tonic and constitutive porperties which have been and will continue to be a means of relief and strength to thousands. McArthur's Syrup Hypophosphites (Lime and Soda) Comp. is a reliable preparation worthy of trial. If a stimulant is needed, you may add it. It isn't there when you do not need it, as McArthur's Syrup is simply a tissue builder, a permanent tonic.

Martin H. Smith Co., 68 Murray St., New York: Dear Sirs: Permit me to thank you deeply for the courtesy shown to me. The Ergoapiol (Smith) worked like a charm, and I am more than pleased with it. There was not the slightest pain accompanying the last menstrual period and the flow greatly diminished, without, also, any feeling of after weakness. You can imagine our gratitude to you when she has had to endure pains, heretofore, fully as severe as those during labor. Again thanking you and assuring you we shall always laud Ergoapiol (Smith), I remain, yours truly, John Mears, Med. Examiner Pacific Mutual Life Ins. Co.

COMPLICATED ANAEMIA.—By T. J. Biggs, M. D., Stamford, Conn.—Ruth K——, age 14, American, admitted Nov. 14th. Diagnosis: Essential Anaemia. The patient had been sent to me by Dr. B——, who said that in spite of all treatments employed, his little patient had grown steadily worse, and the parents were well night discouraged, her condition was associated with menstrual disorders, a year previous she said her disposition seemed to change. She found she was becoming morose and despondent, at times hysterical and suffered very much from melancholy. Her menstrual disorder was of the menorrhagic form, her complexion

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pallid, waxy, skin puffy without oedema; she was easily fatigued upon the least exertion; the heart was irritable, there was shortness of breath, pulse full, but soft, and at times pulsations in the peripheral veins. There was a disgust for food, imperfect indigestion and occasional attacks of gastralgia. In the right apex there was a suspicious dullness, indicating a possible incipient phthisis. Examination of the blood showed a relative decrease in quality and quantity of the haemaglobin, resulting in the blood being paler than normal. The red corpuscles were lighter in color and showed less tendency to form rouleaux, their character was changed, not being of uniform size, some normal, others small (microytes), others unusually large (macrocytes), others irregularly shaped (poikilocytes). The number of corpuscles to a cubic milimetre was about 2,500,500. The white corpuscles were considerably increased in number. A few granular bodies were present, indicating degeneration of the white corpuscles.

The patient was put to bed, secretions regulated, and a half teaspoonful of bovinine was ordered every hour in peptonized milk.

On Nov. 18th, the bovinine was increased to a tablespoonful every two hours.

Nov. 30th, the bovinine was increased to a wineglassful every two hours, given in peptonized milk, alternating with old port wine. The patient at this time showed quite some improvement, felt stronger, slept better, digestion seemed excellent, bowels regular, and she slept throughout the night quietly.

Dec. 10th, microscopic examination of the blood showed increased quantity and quality of haemaglobin, and red blood cells 3,000,000 to the cubic millimetre.

Dec. 18th, the patient had gained seven pounds in weight, color good, puffiness of the skin disappeared, and she was taking daily exercise in the open air without suffering fatigue.

Dec. 24th, microscopic examination of the blood showed haemaglobin almost normal, the red blood cells about 4,500,000 to the cubic millimetre, general condition splendid.

On Dec. 26th, patient was discharged cured.

The complete thorough and rapid cure in this case was undoubtedly due to the blood treatment, for all through her course of treatment, outside of carthartics and some mild heart stimulant, she took absolutely nothing but bovinine,. Bovinine acts in anaemia in all its forms by first stimulating the blood cells to a healthy proliferation, and secondly, by properly and thoroughly supplying perfect nutrition, carries them on to a full and healthy maturity. Iron in all its forms, while at first undoubtedly beneficial, can only go half way, for it simply stimulates the proliferation of the blood cells and supplies only partial nutrition, the result being that in the majority of cases where it is employed alone, many of the newly born cells, for lack of proper nutrition, atrophy or become granular bodies.

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VITA AURANTII (Haber)—(Life of the Orange)—On August 28, 1900, an order was received for 50 cases Vita Aurantii (Haber) from the largest drug house in Bankok, Siam. This is the second order within a few months shipped to the Antipodes and is certainly a compliment to California, and one of her most beneficial products. Vita Aurantii in fever is remarkably soothing, a sedative in nausea and vomiting and the iron and manganese contained makes it remarkably beneficial in anemia, convalescence and allied conditions.

J. L. Ridley, M. D., Huntsvville, Ala., says: I have used S. H. Kennedy's Extract of Pinus Canadensis, both White and Dark. I can frequently cure gonorrhea without any other remedy. I use either as an injection, and prescribe the Dark internally, where there is irritability about the mouth of the bladder. I have learned to regard it as a specific. In chronic cystitis I have derived great benefit from it, and in leucorrhea it relieves when many other remedies fail. It is a valuable remedy, and I have had marked success with it.

WORTHY OF NOTE.—The recent developments in experimental pathology and therapeutics shed a flood of light upon a well-established clinical fact, i. e., that most cases of general debility associated with impoverishment of blood, tissue and nervous force are unbenefited by the ordinarily employed tonics, iron, arsenic, strychnine, etc. Precise methods of investigation show that the essential feature of anaemia, nervous exhaustion and malnutrition is a failure on the part of Nature to rebuild tissue and force as fast as they are consumed by the physiologic functions. Iron, arsenic, strychnine, etc., can never bring about the process of metabolic equilibrium. What Nature needs is help—help along the same lines by which she herself maintains the balance of waste and repair. Gray's Glycerine Tonic Comp. is uniformly effective because it duplicates and reinforces Nature's methods. This remedy is primarily a stimulant to normal nutritive processes; it begins aright by coaxing atonic, functionless digestive organs to resume their normal work—enables them to digest and assimilate exactly what Nature needs—food for blood, tissue and nervous force. It is an invariably effective remedy in anaemia, nervous exhaustion and malnutrition from whatever cause.

PETROLEUM IN THE TREATMENT OF INFANTILE DIARRHOEA.—W. E. Fothergill in conducting his clinical researches (Medical Chronicle, Manchester, England, April, 1900) during the summer of 1899, administered petroleum in thirty-four cases of infantile diarrhoea. "The preparation was an emulsion containing 33 1-3 per cent of petroleum and the doses varied from 3ss thrice daily to 3i every four hours; the usual dose for a child a year old was 3i of the emulsion (m 20 of petroleum) thrice daily. In two cases salol was substituted at the end of a week. One child died. In the remaining cases recovery was rapid and complete. There was no derangement of the stomach, vomiting ceased almost before the diarrhoea was checked, and the stools soon recovered their normal color and consistency. The emulsion seemed also to favor recovery from the accompanying bronchial catarrh. It is said that the whole quantity of petroleum ingested may be recovered from the faeces. Clinical observation shows, however, that petroleum has an influence on mucous membranes other than those of the alimentary canal. Its action in cases of bronchial and vesical catarrh can be explained only by supposing that after absorption from the intestines petroleum is excreted by various organs. These experiments seem to prove that infantile diarrhoea can be treated successfully without the use of opium or astringents. Angier's petroleum emulsion has been prescribed by the medical profession of the United States as well as of England, for many years for just this class of troubles and the foregoing results have often been verified in the hospitals of this country and by leading practitioners. Angier's petroleum emulsion contains 33 1-3 per cent of purified crude petroleum, 9 grains of the combined salts of Lime and Soda, with glycerine and emulsifying agents and was probably the emulsion used by Dr. Fothergill. It is particularly adapted to the treatment of infantile troubles. It does not in any way disturb digestion or irritate the

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stomach, but on the contrary, benefits them in every way, and children always like to take it. The emulsion may be prescribed to be taken in a little milk or water, which eliminates all taste of the medicine.

URIC ACID DIATHESIS—VITA AURANTII LITHOLYTICA.—Physicians have for a number of years recognized the indispensability of the salicylates and phosphates in this common and troublesome condition. These drugs are our sheet anchor; but to administer them in a palatable form has been quite impossible. We believe that in the peptonized natural juice of the orange a menstrum has been found of remarkable utility. The soapish and most disagreeable taste of these drugs is beautifully disguised and their action made more efficacious, because of the patient's ability to more readily assimilate them and to take them more frequently and in larger doses. This combination does not nauseate because the medicines are not tasted and are not irritant to the stomach. Vita aurantii litholytica is the most palatable uric acid solvent before the medical profession. In conditions causing sluggish livers, catarrhal disease of the bile ducts, gout, rheumatism, lithiasis, etc., this tasteless combination deserves the fullest consideration of the profession. Occidental Med. Times.

HOLOCAIN IN EYE DISEASES.

Edward Jackson, in the April American Therapist, says that Holocain is superior to cocain as an agent for producing local anesthesia for the performance of certain operations of the eye. Cocain produces contraction of the blood vessels, decrease in the tension of the eyeballs, loss of elasticity, and frequently results in introduction of infections. Holocain, on the contrary, does not dilate the pupil, nor diminish tension, nor interfere with nutrition, and has a distinct bactericidal influence. The anesthesia produced by Holocain is equal to that produced by cocain, if not quite so prolonged. Dr. Jackson thinks that Holocain should be invariably employed as the local anesthetic in the removal of foreign bodies, because of its antiseptic power, which protects the cornea from infection.—Fort Wayne Medical Journal-Magazine.

EPISTAXIS.

℞ Alumnol .... ℥i
Aquæ destil., q. s. ad..... ..... ℥ii
M. Sig.: Use as a spray to check the hemorrhage.

Alumnol is obtained by a reaction between a barium compound and aluminum sulphate. It is a white powder, very soluble in water or glycerin. It is incompatible with alkaline solutions, the hydrate of alumina being precipitated.

LOVE'S YOUNG DREAM ACCORDING TO THE SCALE.

The maid was fair, her pa was rich,
The youth was poor, and so
He sought her as the gallant deer
Pursues the timid Do.
Upon his knees he said those things
That lovers always say,
And her bright eyes reflected love's
Reciprocating Re.

His passion, so he said, was deep
As the unmeasured sea,
The maiden coyly murmured "Can
Such treasure be for Mi?

"This is so sudden, sir, but yet,
As 'tis so, ask papa!"
He winced. To great lengths he would go,
But was not that too Fa?
For pa's portentous toe loomed big,
But, fired with alcohol,
He went to brave that potent foot;
She waved her para— Sol.

They met—the lover and the toe.
He cannot show the scar!
In point of etiquette the youth
Is so particu— La.

So, spurned, he roams the outer void.
The maiden—where is she?
Immured in solitude, no more
Her suitor shall she Si.

The Roman father chuckled soft,
Reflecting, "Well I know
The rascal sighed not for my girl—
His object was my Do!"

—Boston Traveler.

We are so jolly, contented, and gay,
Enid and I and the baby,
What do we care for the Appian Way,
Enid and I and the baby?
Politics, wars, and the tariff may go,
Little we reck how the fickle winds blow,
We're a triumvirate, mighty and low,
Enid and I and the baby.

Climb up, my little son, here to my knee—
Enid and I and the baby,
Isn't he sturdy and brave as could be?—
Enid and I and the baby;
Take him, my dear, he is weary with play,
See how he blinks in that Sleepy-town way,
Here is a kiss all around, and hurra—
Enid and I and the baby.

—Robert Loveman in the April "New Lippincott."

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The Medical Fortnightly.

Issued Tenth and Twenty-fifth of Every Month by the Fortnightly Press Co.

UNDER THE EDITORIAL DIRECTION OF

FRANK PARSONS NORBURY, M. D. AND THOS. A. HOPKINS, M. D.

Secretary: CHARLES WOOD FASSETT, M. D.

A COSMOPOLITAN BIWEEKLY FOR THE GENERAL PRACTITIONER

Editorial Offices in St. Louis, Chicago, Cincinnati, Jacksonville, St. Joseph, Kansas City, and Pueblo, where specimen copies may be obtained and subscriptions will be taken.

Address all business communications to the Fortnightly Press Company.

Address all contributions and books for review to the Editors, Suite 312, Century Building, Saint Louis.

Volume XVIII **DECEMBER TENTH** **Number 11**

Editorial Department.

Qualified Public Health Officers.

AT THE recent meeting of the American Public Health Association, Dr. Wyatt Johnson, of Montreal, in a masterly paper inveighed strongly against the looseness of methods in America by which men are able to secure positions as health officers, or as members of boards of health without having the necessary qualifications. He advocated high standard of qualifications, and urged the necessity of high hygienic education for these officers.

This subject was further considered by Dr. Jones, of Greenwich, Conn., who proposed the endowment of chairs of preventive medicine; fellowships for advanced students and awards for original investigation in sanitary science.

We are pleased to note this endeavor on the part of this, the leading association of its kind in this country, to recognize true merit as the basis of appointment to the important positions as health officers.

In the West there is a disposition on the part of the Governors, having the power of appointment, to choose trained officials for these positions. In fact State Medicine, as we now have it, was born in Illinois, where the master mind of Rauch recognized the needs of reform, and outlined measures to meet these needs.

Illinois has since with slight exception maintained this high standard of efficiency inaugurated by Rauch, and especially within the past four years has, through its executive officer of the State Board of Health, Dr. J. A. Egan, lead in many excellent measures calculated to enable Illinois to maintain the lead among the States of the Union, in all that pertains to public health.

Just here we would add that Governor-elect Yates, who always recognizes merit where he sees it, should consider Dr. Egan's enviable record, and re-appoint him to the position he has so honorably and faithfully filled. Illinois and the West will then be truly in line with the policy urged by the American Public Health Association and in accord with the universal law of the reward of merit.

We hope all States in the West will see to it that public health shall be the first consideration, and political pull the ignoble last to be maintained in connection with the needs of the people. F. P. N.

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State Medical Organization.

IN THE line of progress in the organization of the medical profession, the year 1900 has been characterized by a movement calculated to affect permanently the entire field of organization of medical societies. We allude to what is called the Connecticut plan of State organization, which has been so successful in that State, that Vermont and New York have adopted this plan, and Illinois now has it in contemplation. It is in brief as follows:

Membership in the State Medical Society is obtained only through membership in some county or other local organization. The local society is made the basis of organization of the State society, and the membership fee paid to the local society, thus insuring membership in the State organization. This plan is wide, comprehensive, and is calculated to reach the public-spirited, progressive physicians in every community.

Organization, then, of this wide-awake element of the profession; this element which indeed is back of all the true progressive spirit of the age in every walk of life, holds in its power the lever which can move the world.

Why not grasp the lever (organization) and use the fulcrum (the survival of the fittest method), and thus insure progress? It is timely that every State should organize, and every medical man who believes in progress; in the honor of his chosen profession; in the honest endeavor of true manhood to overcome fraud, thwart dishonest practice and lay bare the pretenses of quackery, to unite in State organization on the true basis of membership, the local society. Make each and every local society a live organization, do not let petit jealousy, neighborhood quarrels and ignoble competition wreck the possibilities of good work, of meritorious study and investigation, but instead get down to business. Every physician who is true to his calling, has good in him; his heart is in the right place, and he loves his profession. Invite him to your county society meeting, make him feel he is in a fraternal organization where he is in truth a brother, and that he is as much a part of this great organization, the medical profession, as the member who is always present at the meetings and always ready to discuss a paper, the only difference being, one is broken into the harness, the other makes his a burden.

Break the ice, get into the harness and pull for organization, and thus win success for the State. Let us remember that in our strife we are not seeking favor for the profession, but rather the benefits which go to the State in public health, in conservative jurisdiction over irregular practice and wanton quackery.

Illinois is waging a vigorous campaign for State organization, and results now show that success surely will come. Already the State Medical Society has 1000 members and bids fair to have 1500 before the next annual meeting, when it is proposed to complete re-organization by making the local society an integral part of the State organization.

Much credit is due one of our valued contributors, Dr. C. E. Black, chairman of the Legislative Committee, and President of the Society, Dr. George N. Kreider, for the vigorous policy being pursued, which is awak-

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ening interest throughout the State. We hope Missouri will also see her way to organize on this basis. It is the only one that will insure success and win prominent recognition from legislative bodies, etc. F. P. N.

THE palaver of the lightning-rod agent is always plausible. The auto-hypnotization of the christian scientist has about it a halo of self-justification The jugglery of words of the street fakir and his apparent sincerity sell solutions of sulphate of magnesia for magnetic bitters. The new animal therapy theories and beliefs carry conviction to the credulous when borne on the winds of pseudo-science. The language of medicine with its technical expressions, well rounded, well sounding phrases, in the mouths of apparently scientific men, is apt to make a good appearance, win friends and dispel foes, when it flows like the wonderful pitcher, and creates as much excitement among the credulous. The New Animal Therapy theories, practices, etc., are just now parading under the guise of real science with much *apparent* sound reason for their existence, judged by the tinkling cymbals and sounding brass of the contributors to the *Journal of the A. A. T. A.* Dressed in medical language, which to the credulous physician appears as polished as that of Watson or of Mitchell, as apparently honest as that of Osler or Keen, and as convincing as that of the elder Gross or of Kelly, this new therapy is waging its struggle for recognition. It probably has some virtues, like other Pharisees, but the externals of these virtues are more apparent than real, while no internals exist. It is simply a dummy, a side show; a parody; a panoply used to hide the sinister motives of the financial push behind the game. It is an evidence of the good skin used to cover up the lurking hyena which stealthily pulls the coin out of the credulous, and grows on the judicious use of printer's ink, a full stomach (the banquet to the credulous physician) and the signs of "being the real thing."

Again, the New Animal Therapy.

Lowenthal, Hawley and others fling a flowing pen, they no doubt have the culture attributed to them—they no doubt are clever gentlemen, but the old story of the spider and the fly, flits like phantasm across memory's visions and leaves a bad taste in the mouth when we read these bulletins and hypothecated cases.

Again, the old kick against ethics is the old ear-mark, which from Dawson City to Cape Colony proclaims the "New Animal Therapy" is out for the money there is in it. An ass even with his ears trimmed is yet constitutionally an ass, so quackery, with its ears trimmed and sailing under the guise of an association of physicians, is the same old ass, even though it is called a goat, because it cannot get away from its constitutional essentials. New Animal Therapy may be a hybrid, a cross between quackery and scientific medicine, but judging from its literature, its financial methods and the way the game is worked, it is a virile hybrid and out of the line of the ordinary cross-cut hazel splitters. F. P. N.

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A Psychic Discordant Periodical.

WE admire originality, fearlessness and firmness of speech. We also admire good horse-sense, reason and ability. But eccentricity must not be taken for originality, loquacity for fearlessness, imperiousness for firmness, nor ridicule for ability. We would, therefore, enter one long protest against a periodical of protest, called *The Philistine*, edited and published at East Aurora, N. Y., which tries to be original, poses as a fearless idealist, and in rather discordant and eccentric speech, preaches "the widest liberty to individuality in thought and expression." This journal has probably received more attention than it rightly deserves, simply because with pyrotechnic display of language and thought, not uncommon among psychic degenerates, it startled, amused and interested many who are fond of variety in the make-up of their literary pabulum.

But people get tired of spice, it is well enough as condiment, but not wholesome as daily bread. The balance of this periodical we always thought was unstable, it cannot hold a true line of direction, and lately it has shown such paranoical symptoms, that we believe it surely has skipped a cog. *The Philistine* is indeed paranoical, as shown by its vicious attack upon Dr. Geo. Gould, the versatile editor of the *Philadelphia Medical Journal*.

We have been in touch with Dr. Gould for several years, and every one who knows him certainly has profound regard for him as a scholar and gentleman, even though as a critic he wields a harpoon-pointed pen. *The Philistine* is out of tune; it is a discordant periodical of the bill-poster order; it loves a startling climax, colored lights and a big bass drum.

F. P. N.

IN this number will be found an interesting letter by one of our editorial staff, Dr. Josephine Milligan, who has been doing post-graduate work in Europe. Dr. Milligan is a well-trained observer, an acute diagnostician and a cultured woman. We are pleased to have the opportunity to publish this letter treating of Women in Medicine in Germany.

PUT ME OFF AT BUFFALO.—If you don't know just where to go next summer, you can't make any mistake in going to the Pan-American Exposition. The world-famed cataract of the Niagara is so conveniently near the site of the exposition that it may fairly be included in the list of its attractions. The meeting of the Mississippi Valley Medical Association, at Put-in-Bay, may be included in this trip. The San Francisco *Weekly Examiner* has decided to send six of its subscribers to the Pan-American Exposition and supply each of them with not only first-class return ticket, with stop-over privileges, but with $300 each in cash. With such a large amount of spending money and traveling expenses paid, the six lucky subscribers to this leading paper of the Pacific Coast ought to have a good time at Buffalo and the Pan-American next summer.

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The Reviewer's Table.

Books, Reprints, and Instruments for this department, should be sent to the Editors, St. Louis

RHINOLOGY, LARYNGOLOGY AND OTOLOGY, and Their Significance in General Medicine. By E. P. Friedrich, M. D., Privatdocent at the University of Liepzig. Authorized Translation from the German. Edition by H. Holbrook Curtis, M. D., Consulting Surgeon to the New York Nose and Throat Hospital, etc. Philadelphia, W. B. Saunders & Co. 1900. 348 pages. Price, cloth, $2.50.

THIS book covers a field that is especially important to the general practitioner, viz., the relationship of general diseases to those of the ear, nose and throat. It is an aim to unite the specialties, rhinology, laryngology and otology, in a way that they may prove most serviceable to the general practitioner as well as the specialist. In twelve well written chapters are discussed succinctly diseases of the respiratory organs in their varied relationships; diseases of the circulatory system; digestive system; blood; chronic constitutional diseases; acute infectious diseases; chronic infectious diseases; diseases of the kidney; skin and sexual organs; diseases of the eye; intoxication and nervous diseases. The proof that the book possesses merit is shown in having H. Holbrook Curtis as editor, who himself says regarding this book: "One cannot read the book without admiration for a physician who is able at once to be observant of the minutest detail of constitutional disturbance, and also to possess so intimate a knowledge of the specialties whose reciprocal relations depends." The physician will, at this season, find this book very serviceable, because being full of new thoughts and suggestions.

F. P. N.

MANUAL OF THE DISEASES OF THE EYE. For Students and general Practitioners, with 246 original illustrations, including 12 colored plates. By CHARLES H. MAY, M. D., Chief of Clinic and Instructor in Ophthalmology, Eye Department College of Physicians and Surgeons, New York. WILLIAM WOOD & CO., New York.

THIS manual is in keeping with the well-known concise methods of expression of the author, and is adopted especially for teaching purposes. The book considers the eye and its diseases in twenty-six chapters. The first three chapters discuss the examination of the eye by Inspection and Palpation; Subjective or Functional Examination and Objective Examination, including the use of the Ophthalmoscope. This is of especial value to the student, and while brief covers the subject fully. Next are chapters considering the diseases of the eyelids; lachrymal apparatus; orbit; conjunctiva cornea; sclera; iris; ciliary body choroid; uveal tract; intra-ocular tumors; glaucoma; diseases of the vitreous; diseases of the lens; retina; optic nerve; amblyopia and functional diseases of the retina. Following are excellent chapters on the eye as an optical apparatus, its errors of refraction, accommodation and motility. Then comes a valuable chapter on ocular therapeutics, and rules for operation on the eye. It is systematic to the letter, and is calculated to train the student to be a thorough observer. This book is deserving of a permanent place among the books necessary for the student's guide, and even the practitioner will do well to have it on hand for ready reference.

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THIS little volume is a marvel of compactness and convenience, it is surprising that so much could be gotten into so small a book, and the matter be in no wise the worse for the necessary condensation, comparing it with several more voluminous books of a like nature, we find that it has the advantage of each in the breadth of its range and in the aptness of presentation. It reflects great credit on Dr. Gross, the labor of collecting and editing the material for such a book is far greater than the book itself would indicate. He has been fortunate in giving us a remarkably clean, clear, up-to-date text, from which errors have been carefully excluded. The book deserves a more excellent binding; it seems serviceability has been the prime object with the first edition, no doubt the second will be put up in leather.

MEDICAL ANALECTS. By LOUIS GROSS, M. D., San Francisco. A vest pocket Vade-Mecum containing a wide range of Tables, Rules and Facts which are presented for the assistance of the physician in his daily work. 130 pages, bound in Cloth. Price, $1.00. The CALIFORNIA PHARMACAL CO., San Francisco, Publishers, 1900.

THE uniform excellence of the contributions to this valued quarterly of clinical medicine, noticed especially since the present editorial staff has assumed control, speaks well for American medical literature and careful selection and editing on the part of the staff. It is the aim of the editors and publishers to supply to "the practicing physician the exact help which he most needs." The present volume (Vol. III, 10th series) is indeed of value and an index of the usefulness of the International Clinics. It contains "Symposium on Genito-Urinary Diseases," and we note two of our own editorial staff are contributors, viz., Ferd C. Valentine and Bransford Lewis. The former writing on "Aseptic Urethral Instrumentation;" the later "Ureteral Catheterism in the Male; A new Ureter Cystoscope." The chapters on Therapeutics are valuable in their suggestions. The first contribution in the chapters on Medicine is one of the inimitable lectures of that master in clinical instruction, DaCosta. Other lectures are replete with suggestions, viz.: Eskridge on "Rigidity of the Spine with Ankylosis and Deformity of other Joints;" Walton on "Degeneracy;" and in Surgery the lectures are by such authorities as Meyer, Rodman, Morris, etc. In Obstetrics and Gynecology Ballantyne, Pinard, Chauncey D. Palmer, of Cincinnati, one of the pioneers of gynecology in the West. In diseases of the eye and ear, Fox of Philadelphia has an excellent chapter on "Injuries of the Eye-lids and Eye-balls." Two excellent monographs are included in this volume, either of which alone is worth more than the price the book. The first, on "The Use and Care of the Microscope," by Wm. C. Krauss, M.D., F.R.M.S.; the second, "The Scientific Modification of Milk," by Thompson C. Westcott, M.D. This volume is certainly most complete and superb, and the standard thus maintained means that the International Clinics will grow in popularity and value. F. P. N.

INTERNATIONAL CLINICS. A Quarterly of Clinical Lectures and Especially prepared articles on Medicine, Surgery, Therapeutics, Obstetrics, Pathology, Pediatrics and the Specialties. Edited by HENRY W. CATTELL, A. M., M. D., and staff of collaborators. Volume III., Tenth Series, 1900; Philadelphia: J. B. LIPPINCOTT COMPANY, 1900.

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THAT Garrigues on Diseases of Women has reached its third edition in two years speaks in complimentary terms of its practical value as a text-book for students and practitioners. The previous editions received especial endorsement because of being eminently practical, clear and thoroughly scientific in technical teachings. This edition has been thoroughly revised, thus making it strictly up-to-date, and giving it especial value to practitioners as a reliable reference work. Its therapy is broad in its teachings, showing a wide experience in both medicine and surgery. The young practitioner will find it a friend indeed, and many of the perplexing problems of applied gynecology will be solved by its careful teachings.

A TEXT BOOK OF THE DISEASES OF WOMEN. By Henry J. Garrigues, A. M., M. D. Gynecologist to St. Mark's Hospital in New York City; Gynecologist to the German Dispensary in the City of New York, etc. With 667 illustrations. Third edition. Thoroughly revised. Philadelphia, W. B. Saunders & Co., 1900. Price, cloth, $4.50.

IT IS a pleasure to the student physician to welcome this very valuable periodical, so rich in the new and worthy contributions to medicine and surgery. Few physicians can afford to be without the help which is given by this quarterly review of progress. This volume contains diseases of thorax and its viscera, including the heart, lungs and blood vessels by William Ewart, M.D., F.R.C.P. It is needless to say, that Dr. Ewart keeps up the standard of contributions to medical literature and of the standard maintained by the editor, Dr. Hare, in this periodical. Ewart has sought to cover that part of the clinical features of his subjects, which will be most valuable to the general practitioner in handling his daily practice. Diseases of the Skin are reviewed by Prof. Henry W. Stelwagon. It is certainly one of the finest epitomes of the literature on diseases of the skin ever published. The labor involved in preparation of this one article must have been great indeed, considering the citations to periodical literature named. Diseases of the Nervous System, by Dr. William G. Spiller, is to us one of the most attractive reviews of this volume, because of the care given to the clinical features of nervous diseases. The literature has been carefully reviewed, and all that will be of service to the general practitioner, has been cited. Progress in this important field of clinical medicine is placed before the physician in an attractive, interesting and valuable way. The review of Obstetrics is presented by Dr. Richard C. Norris, and is one of great value. Every physician who reads this carefully prepared digest would feel that he has the very choicest selection of the facts in obstetric science for the year. Norris well says, "The growth of obstetric science during this period (this century) has been remarkable," and when we consider that most of it is comparatively recent, it seems to us that this science and art alone ought to bear testimony to wonderful achievements of modern medicine. Progressive Medicine is a great credit to its editor, publishers and able contributors.

F. P. N.

PROGRESSIVE MEDICINE. Volume III, September, 1900. A Quarterly Digest. Edited by Hobart Amory Hare, M. D., prof. Therapeutics and Materia Medica in Jefferson Medical College of Philadelphia. Octavo, pp. 408, with 14 engravings. Issued quarterly. Philadelphia and New York; Lea Brothers & Co. 1900. (Price, $10.00 a year.)

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IN America medicine writers of fiction are remarkably few, but the few are marking a popularity which must gratify the whole profession. Dr. John Uri Lloyd, of Cincinnati, is one of the few who have combined literature and medicine, and in both he is signally a success. His latest book, "Stringtown on the Pike," is one which will please the profession as well as the public, in it the element of mysticism is pronounced, and the scientific man has ever delighted in that which baffles science, or that which comes outside its realm. It would he impossible to do justice to all the strong points of the book in the space at our command; it is brilliantly conceived and forcibly written. To us one of its best features is the characteristic which must make the world have an increased love for the old South—and the new. We are only entering on the period where the facts and fancies of the South shall furnish the foundation for a distinct branch of American literature. "Stringtown on the Pike" demonstrates the possibilities of the field, aud accentuates the province of fiction to perpetuate features distinctively Southern which are fast disappearing. T. A. H.

STRINGTOWN ON THE PIKE. A Tale of Northernmost Kentucky. By JOHN URI LLOYD, author of "Etidorpha." With illustrations. New York: DODD, MEAD & CO., 1900. Price, $1.50, net.

WRITE the California Pharmacal Co., 1139 Polk street, San Francisco, for a copy of "Medical Analects," by Dr. Louis Gross. We understand a few copies of this work will be sent out during December gratis; after the first of the year it can be secured only by the payment of $1.00, which must be enclosed with the order.

THE world has never known a more dramatic situation than that presented by the foreign community within the walls of Peking while cut off from communication with their countrymen. During these long, doubtful weeks, the most interesting figure in this International tragedy was Sir Robert Hart, who for more than twenty-five years has been as far, as a European might, the statesman guiding the affairs of the Chinese Empire. Those familiar in any degree with Eastern conditions, hoped, after the relief of Peking, that Sir Robert would break his long rule of silence and give to the world his story of the events which led to the closing of the gates of the British Legation, and his views as to the policies which should prevail in the settlement of the difficult questions which had arisen. On the 17th of October, the following cable-message from Sir Robert's London representative to the editor of *The Cosmopolitan* was received: "Sir Robert Hart has sent for November number *Fortnightly*, London, and *Cosmopolitan*, New York, an important article on the siege of Peking, about 15,000 words, which I will post you tomorrow." The MS. arrived in time to be included in the December issue. It will be read with the deepest interest, both by statesmen and the general public. *The Cosmopolitan* has been highly honored by Sir Robert Hart in his selection of the American magazine through which this valuable contribution to the history of the world is given publicity.

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Original Department.

PAPERS for the Original Department should be in hand one month in advance, and contributed to THE MEDICAL FORTNIGHTLY exclusively. A liberal number of extra copies will be furnished authors, and reprints may be obtained at reasonable rates, if request accompanies the manuscript. Engravings from photographs furnished free.

Contributions, and books for review, should be sent to the Editors, 312 Century Building, St. Louis.

Signature of contributor, for reproduction, should be sent with every article, on a separate slip; use heavy ink, and allow autograph to dry without applying blotter.

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Medical Study in Berlin.

BY JOSEPHINE MILLIGAN, M. D.,

JACKSONVILLE, ILL.

TO the physician spending a long or short time in Berlin, there is no lack of opportunity for study in any or all branches of his art, and though most German doctors take a vacation, yet even in August, excellent courses in all specialties are given. Instead of polyclinic and post-graduate colleges, such as we have in our large cities, Berlin offers courses given by individual physicians and their group of assistants.

A very general arrangement is, that a professor at the university has a private hospital with free and private beds, or access to the large city hospitals, and offers with the aid of his staff, courses to physicians on his his specialty. Whether the arrangement for beds be private or public, there is never any lack of material. If one knew only medical Berlin, one would be sure that an undue proportion of the population, of nearly two million, were sick, and a good number of them with interesting maladies. This vast amount of material and its absolute disposal for the benefit of the graduate and under-graduate student, is a never-ending source of astonishment to the American, even those used to the overful clinics in New York and Chicago.

The University Medical School does not open officially till the 15th of October; if one is to spend the winter in Berlin, it might be an advantage to matriculate and attend the didactic lectures, as well as the clinics for under-graduates, though the majority of practitioners would prefer taking courses with men whose work was known to them, whether they may be connected with the University or not, and didactic lectures do not appeal to the practical physician as the ideal way of getting what he wants in post-graduate work.

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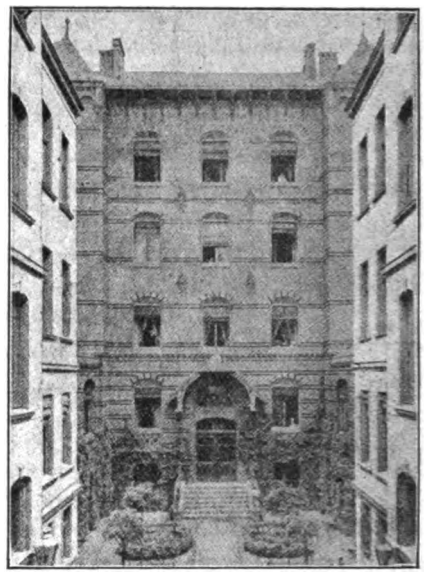
The usual price for a course, no matter what the subject may be, is very generally 75 marks ($18.75). The time taken is usually two or more hours, three or four days in the week for four weeks, though in courses like that in which the use of the cystoscope is taught the understanding of the subject limits the time. A small class is naturally an advantage, and in summer the classes are always smaller than in winter.

The courses are usually given in German, as the work is largely clinical, one with a small knowledge of German can generally understand what is being said. If one has a genius for language, and will work hard on German for three weeks, even with no previous knowledge of the language, at

PROFESSOR LEOPOLD LANDAU.



PROF. LEOPOLD LANDAU'S HOSPITAL.

the end of that time he can understand all professors except the one that speaks with lightning-like rapidity.

There are more than a dozen men, some of whose names are very well known on our side of the water, who offer courses in gynecology. Professor Olshausen gives his work to post-graduates only in the fall and spring. The other men usually offer courses every month. As gynecology was the branch on which I wished to spend most of my time while in Berlin, I chose to go to Professor Leopold Landau, who has a large clinic and private hospital. I found three courses offered there:

I. Gynecological diagnosis, therapy and assisting in operations; individual instruction in this course is given by Dr. Theodore Landau, and is

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given in English, if there are a sufficient number of English-speaking students to desire it.

II. A course in cystoscopy by Dr. Leopold Thumin.

III. A course in the pathology of the female genital organs, and one general pathology, conducted by Dr. Ludwig Pick, who has done the pathological work for the hospital for some years. He has two specimens of the female pelvis and abdominal cavity beautifully dissected, injected and preserved, that show very clearly the relations of the bladder and ureters to the genital system, they are of an invaluable assistance to the would-be operator in showing the anterior position of the bladder and ureters, and the exact points where the arteries cross the ureters. Dr. Pick has also invented a method of preserving macroscopical pathological specimens, so that the original color is retained, even after two years; of course this natural coloring is a great aid to those studying the specimens. His microscopical work is exhaustive with a simple but perfect technique. Miss Grace Dewey, who is studying medicine at Johns Hopkins University, took this course and found it very helpful.

As direful tales had reached my ears as to the way women students were treated in Germany, it was a great relief to be told in good English that I would be welcome in any or all of these courses. Whatever the treatment of German women physicians may be—and it undoubtedly is not as fair as it is in the United States—the treatment of foreign men and women, in the post-graduate courses not connected with the university, is on an equal footing. I say not connected with the university, for as yet, I have had no experience with that institution.

The arrangement, under the name of one man, of courses in a specialty and its allied branches is of great practical use to the doctors concerned, as well as most convenient for visiting physicians. The course in gynecology with the operations fill the morning hours, and the pathology and cystoscopy the afternoon, so that physicians here, but for a short time, can have a full day's work, and really see a great deal in a few weeks.

In the gynecological course the abundance of material gives a great variety of interesting cases, for instance, in the month of August the class saw a patient with a double uterus, operation for extrauterine pregnancy, extirpation of a tubercular kidney, vesico-vaginal fistula caused by childbirth in a patient whose antero-posterior pelvic diameter at the brim was only two and one-half inches, appendicitis with diseased ovary, so many celiotomies for malignancy, fibroids, cysts, pyosalpinx, etc., that one lost count, as well as a great number of minor operations; and the opportunity to examine and make a diagnosis for non-surgical, as well as the surgical cases. The members of the class often performed the minor and assisted with the major operations, in this way getting a better idea of the technique than if they were simply looking on. The vaginal route was always chosen for hysterectomy, unless strongly contraindicated by the size of a solid tumor, or the existence of adhesions. The new point in the technique of the hysterectomy, to me, was the use of huge compression forceps, invented by Dr. Thumin to control hemorrhage. These forceps are ap-

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plied to the broad ligament, so as to include its breadth, i. e., the arteries at the base and top of the ligament. The pressure exerted by this forceps is so great that the ligament appears as a piece of thin white paper when they are removed, all hemorrhage is checked, and no other means of hemostasis is used. The method of application of the Thumin's forceps is as follows: After the cutting of the uterus in halves, and freeing the adnexa of both sides, the forceps point down, are applied from above downward to the whole breadth of the broad ligament, in this way first catching the ovarian artery, and taking great care that the point of the forceps includes the uterine artery, then the handles are closed by a cross-bar lever that greatly increases the amount of pressure. The ligament is shaved off close to the forceps, and then are left in situ for three to six minutes. A second pair are applied to the other side in the same manner.

The first time one sees these forceps used one wonders if the doctor is not called up in the night to control hemorrhage, but one soon gains confidence in this simple and quick method of controlling the large vessels. After the removal of these clamps, if there is any oozing, the usual forceps or a ligature may be applied, though this would rarely be necessary. Small permanent forceps are used to unite the peritoneum and the posterior vaginal wall and an anterior and posterior strip of gauze is introduced, then the patient is ready for bed.

The contraindications for the use of compression forceps are friable tissue, and if it should prove a disadvantage or impossibility to pull down strongly the broad ligament. I also saw the Thumin forceps used by Professor Landau in removing an appendix, the Czerny-Lembert suture being used afterwards. They are useful, too, in compressing any pedicle, so sutures can be more readily applied, then they are not used for hemostasis, but simply to flatten the stump, and are not left on but for a minute or two, as death of the tissues is not desired. The advantage of these forceps are quickness of application, effectiveness in controlling hemorrhage, not leaving in the body a ligature, the very much less pain for the patient than from forceps that are to be removed in forty-eight hours, and the general condition is better than when other methods of hemostasis are used.

The favorite operation for perineorrhaphy was the flap operation, with the removal of a V shaped piece of the redundant vaginal wall.

Catgut is much more generally in use than with us; silk-worm gut is applied only when there is tension on the stitches, or to units skin edges. Silver was only used to unite the abdominal walls. I did not see silk applied at all at the Landau hospital. The anesthetic, not only at this hospital, but in Berlin, is very generally ether. The after-treatment of celiotomies is extremely simple, a little morphine, if the pain is severe, a fluid diet and nothing to move the bowels for five or six days; the idea being to give the intestines rest until a considerable degree of healing has taken place.

After a curetting for any cause no gauze is introduced into either uterus or vagina.

In the methods of non-surgical treatment I shall only speak of what was new to me or uncommon. I haven't seen any divulsion of the uterine canal, or even a pair of steel dilators that are in much general use with us.

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To dilate the canal the solid graduated sounds were used. In the cases presented, it was a very effective method and with none of the disadvantages attending a divulsion.

Hot steam is used sometimes to control uterine hemorrhages; as it is practically a blunt extirpation, it is contraindicated in cases in which the child-bearing period is not over.

In cases of endometritis with a purulent discharge, or in inoperable cancer cases bolus alba or potter's clay on gauze is used. For gonorrheal discharge yeast is introduced into the vagina. For prolapsus uteri in women who wont submit to operation, or in whom operation is contraindicated a child's hollow soft rubber ball is used more effectively than the more conventional forms of pessaries, it may be left in situ for a month, then pierced with forceps to let out the air and removed and replaced.

In speaking of what was offered in this gynecological course I have purposely spoken only of what was different in technique or treatment from our own methods, or at least unusual. There was much routine treatment similar to our own that need not be dilated on.

An interesting feature in the work done at Prof. Landau's klinik is the care taken in making a correct diagnosis. The routine is that the scrapings from every curettment must be examined by the microscopist, and after operation elaborate microscopical examinations are made of the organs removed, to show the extent of the disease in all cases of malignancy, or to clear up or prove the diagnosis. The cystoscope and the collecting of urine from each kidney by means of the ureteral catheter and its careful examination are conscientiously used before any operation on bladder or kidney is undertaken.

The cause in cystoscopy is very complete. The abnormal conditions that may occur in the bladder, such as simple inflammations, ulcers, polypi, papillary tumors, double ureteral openings, etc., are shown repeatedly until recognized by the student, and no student is allowed to call his course finished until he has again and again catheterized the ureters of patients; though the phantom is used until some degree of skill is gained in using the ureteral catheter. Here again the abundance of material is shown, and is of great advantage for the ureteral openings into the bladder represent almost as many different appearances as there are individuals, and to the novice the difference between a recent small hemorrhage into the mucus membrane, or the center of an ulcer that is healing and an ureteral opening is not marked.

From this short resume of courses offered by one professor an idea of the opportunities given to physicians seeking work in Berlin may be gained. As Virchow, Koch, Bergman, Munk, Jolly, Honoch, Olshausen and others too numerous to mention, who have given to medical science something of lasting value, live in Berlin, one sees that there is such a wealth of opportunity one is embarrassed to know what to choose.

Many physicians decide to take courses or regular work in one or two specialties with one man, then go about to see and hear as many operators and teachers as there is time or inclination for, getting in this way both a special and general idea of the German method of work.

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The question is often asked, Can one get better post-graduate medical courses in Germany than in our own cities? My opinion is that just as much good medical work can be gotten with us as in Berlin, for instance; but the advantage in other lines than in medicine more than compensate for the added expense and time to come abroad. In scientific work the German pays more attention to details, to the microscopic and bacteriologic findings, to accuracy in diagnosis, and spends more time in original research, while we have more manual dexterity, and what that implies, a greater number of quick, beautiful operators; light, finer, more ingenious instruments. Also we have a better knowledge of drugs and their uses. The dissimilarity in national temperaments makes some differences in the way the work is done, but the results are very similar.

The advantage in coming to foreign countries lies in the broadening effect of the older civilization in history, art, music, rather than in science. It is more pleasant, if not more profitable, to take medical work where the daily life offers something new in the way of good city government, clean streets, good sanitary arrangements for both the food and water supply, as well as the opportunity to see fine pictures and hear the best of music.

DR. GEORGE N. KREIDER, of Springfield, Ill., has been made Medical Director of the Franklin Life Insurance Co. of Illinois. We congratulate the Franklin Life on securing the series of such an eminently scientific and progressive physician to guide their medical interests, and we congratulate Dr. Kreider on his appointment. Dr. Kreider is the President of the Illinois State Medical Society, which under his wise administration has almost doubled in membership.

CORONER FUNKHOUSER in taking up the responsibilities of the office to which he was lately elected, is convincing the people of St. Louis that the choice was wise, and that a clean, honest, able administration is to be ours. The coroner's office has never been the subject of any great amount of criticism, still there are places where radical reforms should be instituted, and we are mistaken in our opinion if they are not inaugurated under the new administration.

CONSOLIDATION OF SCHOOLS.—The consolidation of two of our medical colleges, the Beaumont-Hospital and the Marion-Sims, which was mentioned in our last issue as a possibility, has been accomplished. We understand that the schools will complete the present course in their individual character, but that beginning with the fall of 1901, when additions to the building at Grand and Caroline will have been completed, and the details of a union of the two faculties arranged, the two will be in fact one, and will hail from that location, it being their purpose to dispose of the Beaumont property.

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Post-Febrile Insanity and Its Treatment.

BY FRANK PARSONS NORBURY, M. D.

JACKSONVILLE, ILL.

Formerly Resident Physician Pennsylvania Institution for Feeble-Minded Children; Formerly Assistant Physician Illinois Central Hospital for the Insane; Physician to Passavant Memorial Hospital; Physician to the Illinois Institution for the Blind, and Neurologist to Our Savior's Hospital; Lecturer Psycho-Physics, Illinois College.

Presented to the Section on Neurology and Medical Jurisprudence, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

ALL disorders that affect general nutrition of the body may affect the mind. The brain, the organ of the mind, is sensitive to nutritional changes, and when these are profound they may permanently affect the mind's nature. The imperceptible fluctuations of brain nutrition have concomitant fluctuations of mental action, and these physical processes, if carefully studied, reveal to us that there is physical basis to mind. The physiology of mind need not be discussed here, nor need we wander into the psychologic labyrinths to study the relationship of body to mind. It is only necessary to state, whatever is the organic process of mental action, its basis is, like that of other elements, in the cell. The brain-cell has its organization and its nutrition; perversion of either causes disturbance of function. This disturbance when changing the routine and characteristics of an individual mental life, we sometimes call insanity. But do not let me have you infer that insanity is alone perversion either in organization or nutrititon of brain-cells, for that would imply that mind essentially was the direct function of the brain, when in reality mind is a constitutional function, a function of the organism as a whole; that is, that every organic function of the body had representation primarily or secondariiy in the whole we call mind. Hence, in dealing with mind disease we are dealing with the body in disease. This fact should impress the metaphysically inclined alienist with the thought that to treat the mind we must treat the body, and he who would succeed as an alienist must first, last, and all the time be an internalist, in touch with the progress being made in internal medicine. Especially is this necessary in handling the mental disorder, post-febrile insanity, which we are now to consider.

In view of the foregoing remarks, there is a cardinal principle in internal medicine which we may take for our text, because of its applicability, and that is, "that disposal of the waste products is essential to the health of the cell." Healthy metabolism is the keynote to bodily health. Burchard has shown that abnormal metabolism always precedes infection and what renders possible the development of disease is not the chance meeting of man and microbe, because we are constantly assailed by pathogenic bacteria, but it is due to the diminished resistance—the modification antecedent to nutrition—the failure of nutrition; in short, abnormal metabolism which permits infection to enter, to remain undisturbed and to grow and multiply. The morbid opportunity is grasped, and nutritive activity being perverted, infection results. The study of infection is one of the re-

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cent triumphs of modern medicine, and should concern every physician, for the possibilities of practical application derived from the patient and exhaustive researches of the laboratory worker extend to every department of medicine. Welch says, "there is now tolerable unanimity of opinion as to the meaning attached to the terms infection and infectious diseases. Most recent authorities understand by infection the condition produced by the entrance and multiplication of pathogenic micro-organisms within the body. An infectious disease is one which is caused by the invasion and reproduction within the body of pathogenic micro-organisms."

We will not, however, attempt to discuss immunity and susceptibility, and while we will not deny the importance of a thorough understanding of the biology of bacteria, yet we are concerned principally in the effects of infection. Every infection should interest us, and the perplexing problems of infection today should be studied that we may contribute our mite to their pathology. Again, as alienists and neurologists, we meet with the clinical results of infection, showing the role which the nervous system plays in this field of study. Ernst* quotes the conclusions of the exhaustive review made by Mills along this line. They are as follows:

1. Specific infection must be included among the causes of mental diseases and of symptoms which precede, accompany, or follow febrile or other infectious disorders.

2. Much negative evidence can be adduced in favor of acute delirium being due to toxemia, such evidence is afforded by autopsies, which reveal neither gross nor histologic lesions; and in these cases the toxemia probably overwhelms the patient before the production of meningitis or other disease.

3. Analogies to nervous affections, which are known, or believed to be of microbic origin, such as multiple neuritis, myelitis and chorea, favor the view that insanities with similar or related phenomena and lesions are also microbic in origin.

4. The evidence afforded by careful bacteriologic investigations of acute insanity is thus far too meager, but shows that various micro-organisms may induce the same or similar types of mental disease.

5. The mental disorders of pregnancy and the puerperal state are probably in a considerable proportion of cases, toxemic, without reference primarily to child-birth; but it cannot be regarded as proved that a bacillus of eclampsia or puerperal mania is a sole cause of these affections.

The psychic and nervous troubles, then, which may originate from toxemia are many. The manner of causation is primarily by means of the absorption of products of the various pathogenic processes. The perverted nutrition brought about by the febrile disease makes possible conditions in which certain substances elaborated by the living organism are modified—either by their disproportioned existence, or by reason of this disproportion abnormal substances are allowed to be generated and retained, thereby becoming toxic substances, and produce poisoning more or less severe. "The augmentation of normal substances either by increased formation or

*Twentieth Century Practice, xiii, 800.

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retention can induce quite a series of accidents," some of which are uremia, asphyxia, cholemia, etc. Many of the new products resulting from faulty metabolism are capable of producing intoxication. As examples we have eclampsia, coma, epilepsy, etc. This intoxication, or toxemia, is now being exhaustively studied both at home and abroad. The excellent work of Christian A. Herter, of New York, is especially instructive and valuable. Regis has made a clinical study of the psychoses of autointoxication, to which we will refer later.

HEREDITY.

Heredity bears a position in the etiology of post-febrile insanity which, in a sense, may be called tentative, inasmuch as the insanity is not a true heritage in post-febrile insanity. The obscure tendencies only partially revealed under the stress and strain of disease may be the simple result of the toxemia. However, there are certain individuals possessed of a neurotic weakness and a physical instability easily influenced by febrile diseases. The condition, due to flaw in the germ-plasm, seems to be easily disturbed, either by the febrile process alone or by its toxic products. The result is, certain persons become delirious under moderate fever, others are practically insane during the continuance of infectious fevers, and some women become insane during the puerperal stage at every childbirth. Again, the toxic products of metabolism affect certain individuals profoundly as in gout, rheumatism, etc. Neurotic temperament is a foundation for alienation following febrile disease. It is an error in breeding, a flaw in generation and about the only true hereditary factor in the etiology of post-febrile insanity.

RESIDENCE AND OCCUPATION.

It has been my experience that residence is a factor in causation of post-febrile insanity, but only as regards location being favorable in the production of the febrile disease. For example, I have seen insanity follow malarial fevers; the home of the individuals being in the malarial belt of Illinois. So-called typhomania is dependent on typhoid fever, and this in turn on poor hygiene, municipal or domestic. Occupation is an etiologic factor only in the same relationship.

TYPES.

The nature of the mental disease, post-febrile insanity, varies. It has no distinctive form, varying with individuals, and in the same individual at different times. I had one patient, who, following typhoid fever, had acute mania of a violent type, but following influenza he developed melancholia. The types usually seen in post-febrile insanity are acute mania, acute melancholia, recurrent mania, and sometimes general paralysis. The psychoses of autointoxication are classed by Regis† under a single head, "confusional insanity." He says, the psychoses of autointoxication have a special symptomatology and a characteristic type. On this account I wish to briefly state his results, that it may aid us in differentiating types. The symptoms upon which he lays special importance are headache, which

†American Year-Book, 1900, p. 421.

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is often initial in its feature and may be prolonged throughout the attack. It may be paroxysmal and so severe as to produce delirium. The second important symptom is insomnia, which is also early and constant in its manifestations. Less frequently convulsive attacks are encountered, also pupilary changes, reflexes, increased tremor, irregular pulse, cyanosis, skin changes, flushings, cold extremities and sallow complexion. He classes the cases as follows: 1, simple asthenic confusion; 2, acute and subacute mental confusion; 3, mental confusion with stupor; 4, subacute confusion of a pseudoparalytic type.

The types of post-febrile insanity may in a measure follow the same classification, except that there seemingly is a wider range of alienation in the cases following infectious fevers as compared with those following auto-intoxication from other sources. The effects of the toxemia, whether it be from the direct action of the pathogenic bacteria or their toxic products, or from autointoxication, are: 1, to depress function, this depression ranging from contusion to profound melancholia with marked delusions; 2, to stimulate function, causing over-excitation of mental processes, delirium, loss of inhibitory control, incoherence, to grave cases of acute mania with profound exhaustion; 3, to impair function by intracellular changes, and finally to abolish function and produce paralysis. The pseudoparalytic to the true general paralytic state.

The severity of the attack of post-febrile insanity seemingly has no apparent relationship to the severity of the febrile attacks, as I have seen cases of acute mania follow a mild attack of facial erysipelas and a case of mild melancholia follow a prolonged siege of typhoid fever.

Again, the time of the appearance of the insanity may vary; thus, it may appear while there still lingers a vestige of the fever, the delirium of the fever merging into a true insanity. A boy, aged 19, who had a mild attack of typhoid fever, running the usual course, developed true insanity four days after his morning temperature reached normal, and his evening temperature only one degree above. Acute mania resulted, from which he recovered at the end of three months. In a case seen in consultation following erysipelas, the mental disease did not develop until five days after subsidence of the fever, and acute melancholia resulted, lasting nine weeks. Another case, following influenza, developed melancholia a week after the febrile attack. We may notice that other sequelæ of fevers develop at the same time that the mental disease is in evidence; thus, in one of my patients phelgmasia dolens and insanity followed typhoid fever. Another case of acute mania following measles in an adult developed pneumonia, and death followed about the fifth day. Another case of measles in an adult, with melancholia, developed acute nephritis, aed finally died of uremia. It may be of interest to state here that I have noticed in my experience that occasionally an acute infectious fever attacking a patient already insane, promotes recovery, or temporarily causes mental improvement. Thus in a case of chronic mania after acute lobar pneumonia, the patient recovered his reason, having been insane seventeen years. Another case of acute melancholia had erysipelas, and during the febrile stage was himself in every way; his complete recovery followed speedily after the erysipelas.

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DIAGNOSIS.

The diagnosis of post-febrile insanity under ordinary conditions is not difficult, especially when following typhoid fever, and I may add erysipelas. In typhoid fever, the peculiar typhoid state is stamped upon the individual, and in the great majority of cases, melancholia is the type of insanity. However, I have seen in consultation several cases in which maniacal excitement was especially pronounced, and two cases presenting the physical symptoms of the paralytic form—a pseudoparetic state, distinguished from genuine paresis by the pupilary symptoms, the speech symptoms, and the absence of characteristic vibratory trembling of the tongue, although motor weakness may extend to the facial muscles. Again, the characteristic delusions of paretic dementia were absent, and instead, a mild delirium, with incoherence, was present. Another feature of diagnostic interest is the fact that many cases of beginning post-febrile insanity first manifest mental symptoms at night, being comparatively lucid during the day. Gradually a change is noticed, the hallucinations become more vivid and delusions appear. Delusions of a persecutory nature are more common in cases following typhoid fever, and it not infrequently occurs that suicide follows such attacks. I have known of three suicides in post-febrile cases in private practice: two by drowning, and ono by jumping from a window. Post-febrile insanity has a true vesanic foundation and it is to be distinguished from the constitutional degeneracies. This is usually easily done by considering the history and general symptoms presented by the case. What may be termed a pseudoparanoia may result as a sequela of influenza—I have seen in consultation two such cases, in which the delusions were systematized and persistent, but later, with the restoration of bodily health, the delusions gradually faded away, and finally disappeared; the patients making good recoveries. The use of modern laboratory methods will cast light upon obscure symptoms in differential diagnosis. A blood-count and microscopic study have been of great aid to me. These, with urinary analysis, should be followed in all cases as a part of the systematic routine of clinical examination.

PROGNOSIS.

The prognosis of all cases of insanity should be guarded, as it is difficult to measure the hereditary factor, and, again, the accidents of mental disease should be considered. In post-febrile mental disease occurring in adults with good family history, and free from any diathetic associations, the prognosis is generally good. Especially is this true of melancholia, but patients with acute mania exhaust themselves rapidly and the natural exhaustion of insanity added to the already debilitated state of the patient makes the prognosis in such cases guarded. But, upon the whole, the prognosis is good in the average case.

TREATMENT.

The treatment resolves itself into proper care, good nursing, a systematized routine, and good hygienic surroundings. Some cases do well at home, but ordinarily they are better off in a well-regulated hospital or spe-

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cial institution. The nursing is of special importance, and in cases following typhoid fever, the routine should be that observed in the care of ordinary typhoid cases, to which is added the care and protection needed to combat the insane features of the case. A more liberal diet is a feature in the care of insane cases differing from ordinary convalescence from typhoid fever. Bushuyer, a Russian, gives a more generous diet to his ordinary cases of fever than we are accustomed to give in this country. He, probably, is too enthusiastic, yet, experience teaches that a liberal diet can be given, provided we treat the patient and not the disease. In the words of Shattuck, "feed him with reference to his digestive power, rather than solely or mainly with reference to his fever." It is to be expected that both skill and ingenuity will be needed in order to properly feed and nurse a post-febrile case; to this end all of our efforts should be centered. It is imperative that due regard be given te elimination, and a proper regulation of the secretions; then as nutrition becomes re-established, the patient will gain in weight, and gradually the mental symptoms will clear up. In many cases it becomes necessary to enforce rest, and in acute mania this must be assiduously secured, else the patient exhausts himself speedily. A modified rest-treatment is to be recommended in cases of a melancholy type, especially after convalescence seems to be pending. There should be no "hard and fast rule" as to rest-treatment; it should vary with the needs of the patient. Massage is indicated in many of the apathetic cases; it promotes nutrition and in some cases will induce sleep. In the true cases of autointoxication, elimination must be promoted by liberal use of aperients, diuretics, and, if necessary, brisk cathartics. The urine should be carefully measured and an analysis made so as to determine its quantity and quality. The percentage of urea should be observed and a microscopic examination made to determine the presence of casts. I saw during the past winter two cases, in consultation, both of whom presented symptoms of autointoxication and had been treated as such, but a more careful diagnosis showed acute nephritis. Uremic poisoning had caused the mental symptoms. Plenty of water is indicated in such cases, both internally and externally. In my hospital cases, I urge a sponge-bath daily, followed by brisk rubbing. Good drinking water is urged on all occasions. As to drugs, I use only such sedatives as are absolutely necessary. Of these, opium and hyoscyamus I use principally, and only in sufficient quantity to produce the sedative effect. Most cases of post-febrile insanity demand tonic treatment from the beginning; iron in easily assimilated form and arsenic are indicated. The anemia is best met by the use of arsenic; iron and strychnia are valuable adjuvants. Other tonics, especially the mineral acids combined with nux vomica and pepsin, or the malt preparations with tonics, are also valuable. In adolescent female cases iron and manganese make an excellent combination

As convalescence progresses, some active exercise may be encouraged, such as walking, riding and light gymnastics. When convalescence is established, and not until then, travel may be suggested. Traveling with a convalescent post-febrile case is not safe, and suicides occur among such patients.

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Diseases of the Stomach.

BY J. M. G. CARTER, M. A., M. D., SC. D., PH. D.,

WAUKEGAN, ILL.,

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[CONTINUED FROM PAGE 687.]

The following table is from investigations of the Munich School (Thompson):

THE MINIMUM AMOUNT OF FOOD FOR DIFFERENT AGES.

AGE.	Nitrogenous Substances. Grammes.	Fat. Grammes.	Carbohydrates. Grammes.
Infant until 1½ years	20–36	30–45	60–90
Child from 6 to 12 years	60–80	37–50	250–400
Man (moderate work)	118	56	500
Woman	92	44	400
Aged man	100	68	350
Aged woman	80	50	260

The following table of Standards for Daily Dietaries was compiled by Atwater.

WEIGHTS OF NUTRIENTS AND CALORIES OF ENERGY (HEAT UNITS) IN NUTRIENTS REQUIRED IN FOOD PER DAY.

	Age and Conditions.	Protein Grammes.	Fats Grms.	Carbohydrates. Grammes	Total Grms.	Potential Energy Calories
1.	Children to 1½ years	28 (20-36)	37 (30-45)	75 (60-90)	140	767
2.	Children of 2 to 6 years	55 (36-70)	40 (35-48)	200 (100-250)	295	1418
3.	Children 6 to 15 years	75 (70-80)	43 (37-50)	325 (250-400)	443	2041
4.	Aged women	80	50	260	390	1859
5.	Aged men	100	68	350	518	2477
6.	Women at moderate work (Voit)	92	44	400	536	2426
7.	Man at moderate work (Voit)	118	56	500	674	3055
8.	Man at hard work (Voit)	145	100	450	695	3370
9.	Man with moderate exercise (Playfair)	119	51	531	701	3139
10.	Active labor (Playfair)	156	71	568	795	3629
11.	Hard labor (Playfair)	185	71	568	824	3748
12.	Woman with light exercise (Atwater)	80	80	300	460	2300
13.	Man with light exercise (Atwater)	100	100	360	460	2820
14.	Man at moderate work (Atwater)	125	125	450	700	3520
15.	Man at hard work (Atwater)	150	150	500	800	4060
16.	Man at moderate work (Moleschott)	130	40	550	720	3160
17.	Man at moderate work (Wolff)	120	35	540	695	3032

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In addition to the amounts here mentioned, water is required. The following estimate is made by K. Vierordt for an adult in 24 hours; 120 gm. albumen, 90 gm. fat, 330 gm. carbohydrates, 2818 gm. of water. A fair average to be drawn from these estimates is, albumen 4½ ounces (128 gm.), fat 3 ounces (90 gm.), carbohydrates 1 lb. (480 gm.) water 5½ pints (2720 c.c.), as a minimum diet for an adult male doing moderate manual labor.

To determine this quantity of different foods it is necessary to know the composition of ordinary food-stuffs. In the following table is presented some of these facts:

COMPOSITION OF THE MOST COMMON FOOD SUBSTANCES.

I. DAIRY PRODUCTS.

	Per cent Albumin	Per cent Fat	Per cent Carbohydrate	Calories Per 100
Cow's milk	4.0 to 4.3	3.0 to 3.8	3.7	64
Cream	3.61	26.75	3.52	276.01
Butter	0.5	90.0	0.5	837
Whey	0.5	0.3	3.6	
Buttermilk	3.0	1.3	3.0	3.67
			0.7 lactic acid	
Kumyss (of cow's milk)	3.55	2.07	1.9 alcohol	32.99
			0.8 carbonic acid	
Cheese (Cream)	25.0	30.0	5.0	394
Cheese	33.0	9.0	3.0	240
Egg	12.5	12.0	0.5	165

II. MEATS AND GAME.

	Per cent Albumin	Per cent Fat	Per cent Carbohydrate	Calories Per 100
Beef (fat)	17.19	26.38	——	315.81
Beef (lean)	20.78	1.50	——	99.15
Veal (fat)	18.88	7.41	0.07	146.61
Veal (lean)	19.84	0.82	——	86.97
Mutton (very fat)	14.80	36.39	0.05	399.31
Mutton (leaner)	17.11	5.77	——	123.81
Pork (fat)	14.54	37.34	——	406.88
Pork (lean)	20.25	6.81	——	146.36
Ham (Westphalian)	23.97	36.48	1.50	453.69
Sweetbread	22.0	0.4	——	93.92
Pulverized meat	64.5	5.24	2.28	322.53
Poultry	22.0	1.0	——	100
Spring chicken	18.49	9.34	1.20	167.59
Duck (wild)	22.65	3.11	2.33	131.36
Squab	22.14	1.00	0.76	100.07
Came	23.0	1.0	——	103.60
Hare	23.34	1.13	0.19	107.08
Venison	19.77	1.92	1.42	105.44

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III. FISH.

	Per cent Albumin	Per cent Fat	Per cent Carbohydrate	Calories Per 100
Pike	18.5	0.5	0.75	83.57
Carp	20.61	1.09	—	94.64
Shellfish	17.09	9.34	—	156.93
Salmon	15.01	6.42	2.85	132.93
Sardellen	22.30	2.21	0.45	113.83
Oysters	4.95	0.37	—	24
Salt herring	19.5	17.0	0.5	
Caviar	28.04	16.26	7.82	

IV. CEREALS AND VEGETABLES.

	Per cent Albumin	Per cent Fat	Per cent Carbohydrate	Calories per 100
Sago	0.5	traces	86.5	356.70
Wheat flour	8.5	1.25	73.0	345.78
Rye flour	10.0	2.0	69.0	342.50
Wheaten bread	6.0	0.75	52.0	245
Rye bread	4.5	1.0	46.0	216
Roll	6.82	0.77	43.72	213.87
Zwieback	9.5	1.0	75.0	356
Cauliflower	2.0 to 5.0	0.4	4.0	35
Carrots	1.04	0.21	6.74	33.85
Asparagus	2.0	0.3	2.5	21
Rice	5.5	1.5	76.0	348.10
Beans	19.5	2.0	52.0	311.75
Peas	19.5	2.0	54.0	319.95
Potatoes	1.5	—	20.0	88
Oatmeal	12.5	5.26	66.77	398.80
Barley meal	8.31	0.81	75.19	323
Spinach	3.49	0.58	4.44	38
Pickles	1.02	0.09	0.95	

SOUPS AND BEVERAGES.

	Per cent Albumin	Per cent Fat	Per cent Carbohydrate	Calories per 100
Milk Soup with wheat flour	5.0	3.25	15.0	112
Meat broth (ordinary)	0.4	0.6	—	—
Meat juice (pressed)	6.0 to 7.0	0.5	—	—
Beef tea	0.5	0.5	—	—
	9.0 to 11.0 albumen	—	—	—
Leube's meat solution	1.79 to 6.5 peptone	—	—	—
Malt extract	8.0 to 10.0	—	55.0	258.30
Barley soup	1.5	1.0	11.0	60.96
Rice pap with milk	8.8	3.5	28.6	182.61
Coffee	3.12	5.18	—	—
Tea	12.38	—	—	—
Beer	0.5	5.25	0.3	—
Porter	0.7	6.0	0.3	60

VI. FRUITS.

	Free acid per cent	Per cent Albumin	Per cent Fat	Per cent Carbohydrate
Apples	0.82	0.40	—	3.54
Pears	0.20	0.36	—	7.22
Plums	1.50	0.40	—	4.68
Peaches	0.92	0.65	—	7.17
Grapes	0.79	0.59	—	1.96
Strawberries	0.93	0.54	0.45	1.01
Chestnuts	—	5.48	1.37	38.34
Sugar cane	—	—	—	3.40
Honey	—	1.20	—	5.28

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VI. URIC ACID IN FOODS.

Substance	Uric Acid and Xanthius	
	Per cent	Grains per lb.
Lamb (cold roast leg)	.0500	3.50
Soup (made from bones)	.0068	0.48
Soup (made from meat)	.0202	1.40
Hospital beef-tea (cooked 8 hours)	.0980	7.00
Saddle of mutton	.0200	1.40
Mutton (cold roast leg)	.0160	1.10
Veal (cutlet)	.0490	3.50
Beef (cold sirloin)	.0160	1.10
Kidney of Sheep	.0490	3.50
Liver of Sheep	.0910	6.50
Fowl (breast)	.0240	1.70
Rabbit	.0150	1.00
Mackerel	.0320	2.00
Mackerel (boiled 15 minutes)	.0150	1.00
Plaice	.0039	0.20
Herring (fresh)	.0040	0.20
Herring (Loch Frne, kippered)	.0900	6.40
Herring (bloater)	.0310	2.20
Beef-steak (treated raw)	.0190	1.30
Meat juice	.6970	49.70
Meat Extract	.8830	63.00
Tea	2.5000	175.00
Coffee	1.0000	70.00
Cocoa	.8400	59.00

Beef-tea boiled only half an hour, Dr. Haig states, does not contain so much uric acid as that given in the table. Hence it is probable that prolonged cooking and the digestive and metabolic processes would yield larger percentages of uric acid in the meat foods than the figures here given represent. Tea, coffee and cocoa do not contain uric acid, but do contain xanthin compounds which are equivalent to uric acid. It is usually considered that a healthy person requires the formation of 3 to 3½ grains of urea per pound of body weight daily. As albumen furnishes one-third its weight of urea, it is easy to calculate the amount of albumen required in the food. Haig estimates that a man weighing 140 lbs. requires 10 oz. of bread, 2 oz. of oatmeal, 2 pints of milk, 1½ oz. of pulses, 1½ oz. of cheese, which in connection with other cereals, fruits, vegetables, etc., will furnish his quota of urea.

VII.—The relative value of foods is shown in the following table from Scammell. (The figures represent percentages.)

Articles	As material for the muscle	As heat givers	As food for the brain and nervous system.	Water	Waste
Wheat	14.6	66.4	1.6	14.0	3.4
Barley	12.8	52.1	4.2	14.0	16.9
Oats	17.0	50.8	3.0	13.6	16.9
Northern corn	12.3	67.5	1.1	14	5.1
Southern corn	34.6	39.2	4.1	14	8.1
Buckwheat	8.6	53.0	1.8	14.2	22.4
Rye	6.5	75.2	0.5	13.5	4.3
Beans	24.0	40.0	3.5	14.8	17.7
Peas	23.4	41.0	2.5	14.1	19.0
Lentils	26.0	39.0	1.5	14.0	19.5

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Articles	As material for the muscle	As heat givers	As food for the brain and nervous system	Water	Waste
Rice	5.1	82.0	0.5	9.0	3.4
Potatoes	1.4	15.8	0.9	74.8	7.1
Sweet Potatoes	1.5	21.8	2.9	67.5	6.3
Parsnips	2.1	14.5	1.0	79.4	3.0
Turnips	1.2	4.0	0.5	90.4	3.9
Carrots	1.1	12.2	1.0	82.5	3.2
Cabbage	1.2	6.2	0.8	91.3	0.5
Cauliflower	3.6	4.6	1.0	90.0	0.8
Cucumbers	0.1	1.7	0.5	97.1	0.6
Milk of cow	5.0	8.0	1.0	86.0	—
Milk, human	3.0	7.0	0.5	89.5	—
Veal	17.7	14.3	2.3	65.7	—
Beef	19.0	14.0	2.0	65.0	—
Lamb	19.6	14.3	2.2	63.9	—
Mutton	21.0	14.0	2.0	63.0	—
Pork	17.5	16.0	2.2	64.3	—
Chicken	21.6	1.9	2.8	73.7	—
Codfish	16.5	1.0	2.5	80.0	—
Trout	16.9	0.8	4.3	78.0	—
Smelt	17.0	very little	5 or 6	75.0	—
Salmon	20.0	some fat	6 or 7	74.0	—
Eels	17.0	some fat	3 or 4	75.0	—
Herring	18.0	some fat	4 or 5	75.0	—
Halibut	18.0	some fat	3 or 4	74.0	—
Oysters	12.6	—	0.2	87.2	—
Clam	12.0	very little	2 or 3	—	—
Lobster	14.0	very little	5 or 6	79.0	—
Eggs (white of)	13.0	—	2.8	84.2	—
Eggs (yolk)	—	29.8	2.0	51.3	—
Butter	—	100.0	—	—	—
Artichoke	1.9	19.0	1.8	76.6	0.7
Asparagus	0.6	5.4	0.4	93.6	—
Bacon	8.4	62.5	.5	28.6	—
Carp	18.0	0.8	2.9	78.3	—
Cheese	30.8	28.0	4.7	36.5	—
Cherries	0.6	21.0	1.0	76.3	1.1
Chocolate	8.8	88.0	1.8	—	1.4
Cream	3.5	4.5	—	92.0	—
Currants	0.9	6.8	0.3	81.3	10.7
Dates (fresh)	—	73.7	—	24.0	2.3
Figs	5.0	57.9	3.4	18.7	15.0
Ham	35.0	32.0	4.4	28.6	—
Horseradish	0.1	4.8	1.0	78.2	16.0
Kidney	21.2	0.9	1.4	76.5	—
Lard	—	100.0	—	—	—
Liver	26.3	3.9	1.2	68.6	—
Onions	0.5	5.2	0.5	93.8	—
Pearl barley	4.7	78.0	0.2	9.5	7.6
Pears	0.1	9.6	—	86.4	3.9
Pigeon	23.0	1.9	2.7	72.4	—
Prunes	3.9	78.6	4.5	13.0	—
Radishes	1.2	7.4	1.0	89.1	1.3
Suet	—	100.0	—	—	—
Venison	20.4	8.0	2.8	68.8	—
Vermicelli	47.5	38.0	1.7	12.8	—
Whey	—	4.6	0.7	94.7	—

The following table giving the potential energy of foods is useful in this connection.

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VIII.—TABLE OF ENERGY ESTIMATED IN FOOT TONS INSTEAD OF CALORIES (YEO).

Energy developed by one ounce of the following foods when oxidised in the body.

Food stuff.	With usual percentage of water Foot tons	One ounce water-free. Foot tons
Beef (best quality), uncooked	48.5	199
Meat (served to soldiers), uncooked	57.8	243
Beef (fattened), uncooked	96.0	280
Meat, cooked	102.6	240
Corned beef (Chicago)	124.0	217
Salt beef	52.0	138
Salt pork	71.6	166
Fat pork	202.0	336
Dried bacon	292.3	346
Smoked ham	179.6	267
White fish	44.3	209
Poultry	50.7	204
Bread	87.5	147
Wheat Flour	123.6	146
Biscuit	173.3	189
Rice	126.5	141
Oatmeal	130.0	154
Maize	132.0	160
Macaroni	122.7	146
Millet	125.9	149
Arrowroot	116.4	138
Peas (dried)	118.9	151
Potatoes	33.0	141
Carrots	14.3	127
Cabbage	13.0	158
Butter	344.5	367
Eggs	67.3	265
Cheese	149.9	245
Milk (cow's) new	26.9	225
Cream	109.2	365
Skimmed milk	20.4	181
Sugar	126.4	128
Pemmican	270.1	293
Ale (Bass's bottled)	30.0	260
Stout (Guinness)	41.5	360

It is not enough to know the amount of food required to sustain the body; we must also know something about the digestibility of foods. If disease of the stomach exists whereby digestion is retarded, even though it is finally accomplished, easily digestible food should be advised. In functional dyspepsia, atony of the stomach, chronic gastritis and dilatation of the stomach food ought to be prescribed which will not require several hours to digest. The following table by Beaumont, showing the digestibility of various alimentary substances in the stomach is most valuable:

IX—TIME REQUIRED TO DIGEST CERTAIN FOODS.

Articles of Diet	Mode of Preparation	Hrs. Min.
Milk	Boiled	3
Milk	Raw	2.15
Eggs, fresh	Raw	2
Eggs, fresh	Whipped	1.30

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Articles of Diet	Mode of Preparation	Hrs. Min.
Eggs, fresh	Roasted	2.15
Eggs, fresh	Soft-boiled	3
Eggs, fresh	Hard-boiled	3.30
Eggs, fresh	Fried	3.30
Custard	Baked	2.45
Codfish, cured dry	Boiled	2
Trout, salmon, fresh	Boiled	1.30
Trout, salmon, fresh	Fried	1.30
Bass, striped, fresh	Broiled	3
Flounder, fresh	Fried	3.30
Cat fish, fresh	Fried	3.30
Salmon, salted	Boiled	4
Oysters, fresh	Raw	2.55
Oysters, fresh	Roasted	3.55
Oysters, fresh	Stewed	3.30
Venison steak	Broiled	1.35
Pick, sucking	Roasted	2.30
Lamb, fresh	Broiled	2.30
Beef, fresh, lean, rare	Roasted	3
Beef-steak	Broiled	3
Beef, fresh, lean dry	Roasted	3.30
Beef with mustard, etc.	Boiled	3.10
Beef with salt only	Boiled	3.36
Beef	Fried	4
Mutton, fresh	Broiled	3
Mutton, fresh	Boiled	3
Mutton, fresh	Roasted	3.15
Veal, fresh	Broiled	4
Veal, fresh	Fried	4.30
Pork, steak	Broiled	3.15
Pork, fat and lean	Roasted	5.15
Pork, recently salted	Raw	3
Pork, recently salted	Stewed	3
Pork, recently salted	Broiled	3
Pork, recently salted	Fried	4.15
Pork, recently salted	Boiled	4.30
Turkey, wild	Roasted	2.18
Turkey, domesticated	Boiled	2.25
Turkey, domesticated	Roasted	2.30
Goose, wild	Roasted	2.30
Chicken, full grown	Fricassed	2.45
Fowls, domestic	Boiled	4
Fowls, demestic	Roasted	4
Duck, domesticated	Roasted	4
Ducks, wild	Roasted	4.80
Soup, barley	Boiled	1.30
Soup, bean	Boiled	3
Soup, chicken	Boiled	3
Soup, mutton	Boiled	3.30
Soup, oyster	Boiled	3.30
Soup, beef, vegetables and bread	Boiled	4
Soup, marrow bones	Boiled	4.15
Pig's feet, soused	Boiled	1
Tripe, soused	Boiled	1
Brains, animal	Boiled	1.45
Spinal marrow, animal	Boiled	2.40
Liver, beeves', fresh	Broiled	2
Aponeurosis	Boiled	3
Heart, animal	Fried	4

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Articles of Diet	Mode of Preparation	Hrs. Min.
Cartilage	Boiled	4.15
Tendon	Boiled	5.30
Hash, meat and vegetable	Warmed	2.20
Sausage, fresh	Broiled	2.30
Gelatine	Boiled	3.30
Cheese, old, strong	Raw	3.45
Green corn and beans	Boiled	2.30
Beans, pod	Boiled	2.30
Parsnips	Boiled	2.30
Potatoes, Irish	Baked	3.30
Potatoes, Irish	Roasted	2.30
Potatoes, Irish	Boiled	2.30
Cabbage, head	Raw	2
Cabbage, head, with vinegar	Raw	4.30
Cabbage, head	Boiled	3.30
Carrot, orange	Boiled	3.13
Turnips, flat	Boiled	3.45
Beets	Boiled	3.15
Bread, corn	Baked	3.30
Bread, wheat, fresh	Baked	1.30
Apples, sweet, mellow	Raw	2
Apples, sour, mellow	Raw	2.50
Apples, sour, hard		

[TO BE CONTINUED.]

Acute Catarrhal Laryngitis in Children.—

℞ Tinct. aconiti..... gtt. viiss
Sodii benzoatis..... ℥ss
Cherry laurel water..... ℥iiss
Syrupi codeinæ—gr. 1 per ℥..... ℥ii
Syrupi aurantii..... ℥v
Mucilaginis acaciæ, q. s. ad..... ℥iv

M. Sig.: One to two teaspoonfuls every hour, according to the age.—Perier, *Pediatrics.*

To Allay Chordee and Sexual Excitability.—

℞ Fluid extract ergot..... 4 drachms
Tinct. gelsemium..... 1½ drachms
Tinct. hyoscyamus..... 4 drachms
Peacock's bromides, q. s. ad..... 2 ounces

M. Sig.: A teaspoonful at bedtime.

For Inflamed Rheumatic Joints.—Osler recommends Fuller's lotion:

℞ Sodii carbonat..... 6 drachms
Tincturæ opii..... 1 ounce
Glycerini..... 2 ounces
Aquæ..... 9 ounces

M. Sig.: Saturate hot cloths with the lotion and apply to the parts.—*West. Med. News.*

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Differential Leucocytosis.

BY L. H. WARNER, A. M., PH. D., M. D.,
BROOKLYN, NEW YORK.

Read before the Mississippi Valley Medical Association, at Asheville, October 11, 1900.

IN former times the lymphocytes and mononuclear leucocytes were differentiated from the colorless blood corpuscles known as leucocytes. The characteristics of the former were known by their relatively large round nucleus, and an extremely small hyaline blastema, while the latter exhibited one or more very strong various shaped nuclei. It remained with Virchow to differentiate between these cellular elements and to distinguish the lymphocytes as the mother cells of leucocytes.

Experimentations in recent times have given us a better insight into the etiology of leucocytosis. Einhorn demonstrated that the ordinary leucocytosis is brought about by the multinucleated neutrophilic granulated leucocytes of the bone marrow and not through the increase of leucocytes. Uskoff, Stoher, Benda and Frankel, like Virchow, still retain their opinion that all leucocytes without exception deviate from the lymphocytes.

Ehrlich in his recent work on hematology takes a different stand, in as far as he admits of a second method of creation aside from the uninuclear and neutrophilic marrow cells. He claims their creation from the large mononuclear leucocytes. Within the bone marrow the multinuclear leucocytes should be created from the uninuclear myelocytes, but in the circulation in which normal myelocytes do not exist, they should deviate from the uninuclear leucocytes resembling the former very much in appearance. The latter, according to Ehrlich's description, have a more or less round nucleus and basophilic non-nucleated cytoplasma, but, according to his opinion, do not belong to the lymphocytes; on the contrary, on account of the breadth and volume of their cell, that is to say, on account of their abnormal morphological habitus, he gives them a special designation.

It cannot be denied that if we examine hematoxylon preparations, we find that the uninuclear leucocytes appear to come into close connection with the multinuclear ones, as both have a non-granulated and affined cytoplasm. On the other hand, in hematoxylon preparations, the large uninuclear leucocytes are hard to be differentiated from the non-nucleated myelocytes. The triacid and methylene blue eosin stains permit us to say that the uninuclear leucocytes can be separate as well from the myelocytes as from the leucocytes.

Although the non-granulated, basophilic, large uninuclear leucocytes have the same affinities as the lymphocytes, it is the intent of Ehrlich to separate them as leucocytes on account of their deviating morphological appearance.

The present error seems to be due to the classification of the various cell forms according to their staining affinities, instead of including in this the external morphological habitus and their relative size. Amongst the eosinophilic and neutrophilic marrow cells, we will find some specimens

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with a large round nucleus and a small blastema, which as a general rule have been classified as eosinophiles without distinguishing between them from other uninuclear eosinophile cells with a large body and a relatively smaller nucleus.

Experimetations with methylene blue and methyl green pyrodine stain lead us to consider these uninuclear cells more nearly related to the lymphocytes. The claim that small lymphocytes may only be found in the thymus glands, and that the uninuclear leucocytes are only found in the spleen and marrow bone, are unwarranted, as uninuclear leucocytes are also found in the thymus glands, and typical small lymphcytes are easily found in every specimen of bone marrow.

No one has been able to distinguish the granulated uninucleated eosinophile cells derived from the spleen from those that were derived from the bone marrow.

The morphological understanding of lymphocytes does not confine itself to certain individual cells, nor alone upon any sized non-granulated cells with a relatively large round nucleus and small blastema (for in that instance we would always be confronted with a certain individual juvenile stage of age), but it also comprises all cells with non-granulated basophilic cell bodies, independent of the nuclear form within them. The same holds good for the granulated leucocytes respectfully the myelocytes. The myelocytes are not to be considered spread out as cells deviating from the bone marrow, but rather as characteristic granulated cells from the marrow, but which can also be found in the spleen and thymus glands. My investigation corroborates the prevailing idea that young leucocytes develop into old nucleated leucocytes, although some recent investigators claim that the lymphocytes develop into non-granulated basophilic polymorphonuclear lymphocytes. This latter theory I am unable to support, the results of my experimentations contradicting said theory. The varying opinions are, to my mind, caused by too close adherence to one or the other staining methods which have been in vogue for years past. It having been demonstrated by Richter, Metchnikoff and others, that the leucocytes are the carriers of nuclein to the various tissues, and that said nuclein was stored within the nucleus of the leucocytes, it appeared both reasonable and interesting to enter upon experimentations regarding the staining affinity of nuclein, using for such puposes the basic stains only. The various basic stains added in equal proportions to 5 per cent solutions of nuclein, demonstrated that Bismark brown exhibits the greater affinity, and if employed for the staining of blood specimens, it should be used after the specimen has been previously treated by the eosin-methylene blue method. By this method, cells in process of karyokinesis can be thoroughly studied, and a clear line of differentiation between lymphocytes, mononuclear and polynuclear leucocytes can be established.

The normal number of leucocytes in human blood is from 8,000 to 9,000 per mm., and deviations of 1,000 in either direction are considered normal. The number of leucocytes within the blood is influenced through various causes, as vasomotoric phenomena, variations in the volume of plasma. Aside of this their division within the blood is physiologically

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changeable, and this latter condition can be aggravated through sickness. They appear or disappear in the circulation upon certain influences (Chemotaxis). Their increase is denoted by leucocytosis, the latter by leukopenia.

Leucocytosis, generally speaking, represents a temporary increase in the number of white corpuscles of the polynuclear neutrophile form. The theoretical conception of leucocytosis gives as a cause—food supply or foreign growth.

Thus we must make a clinical pathological classification of the different leucocytoses.

1. Physiological leucocytosis which must be divided:
   a. in a digestive ieucocytosis;
   b. a leucocytosis due to pregnancy;
   c. a leucocytosis of the new born.
2. Pathological leucocytosis which must be divided:
   a. a leucocytosis due to inflammation;
   b. a leucocytosis caused by malignant tumors;
   c. a posthemorrhagic leucocytosis.
3. A leucocytosis influenced by medication.

A digestive leucocytosis may be produced in man or animal by fasting for a period of ten hours and not more than twenty four hours. This class of leucocytosis may be produced in any healthy subject. The increase of leucocytes varies from 5,000 to 10,000, and an examination of the stomach contents will reveal free HCL. The white cells appear mostly in polynuclear form, the nucleus strongly contracted.

A leucocytosis due to pregnancy was first demonstrated by Virchow (Cellular Pathology, Vol. I, page 178), who noted a monthly increase in the number of leucocytes, and explained as a cause, the gradual enlargement of the lymphatic vessels surrounding the uterus. Von Limbeck differs from Virchow, claiming that a leucocytosis of pregnancy is due to spasmodic inclinations to feeding and the enlargement of the mammæ. Immedlately after confinement the leucocytosis disappears. An examination of the blood in seventeen pregnant women reveals in every case the increase in large mononnclear cells and also contracted nuclei in the polynuclear leucocytes.

Leucocytosis of the new born was first observed by Cohnstein and Zuntz (Pfluger's Archives, Vol. 34). This class of leucocytosis is evidently due to digestion, but differs from a strictly digestive leucocytosis in as far as the leucocytes predominate in the lymphocyte form.

Whenever determining as to the classification of a pathological leucocytosis, it is necessary to be well informed regarding the diet and interval of space from last meal hour as well as the general interval of time between meals. Leucocytosis due to inflammation increases or decreases according to the increase or decrease of fever, hence a glance at the temperature chart illustrative of the preceding twenty-four hours is of importance and a necessity in order to obtain accurate results. The origin of this class of

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leucocytosis, according to Buchner (*Berliner klin Wochenschrift*, 1890), is due to the protein contained within some and all micro-organisms, or, in other words, to the liberated toxins. Bockman's investigations (Archiv. fur klin. Med., Vol. 29, page 481) tended to establish some connection between the run of temperature and the number of red and white corpuscles, resulting in the finding that the number of red corpuscles in acute infectious diseases stands in indirect, and that of the white corpuscles in proportional comparison. Thus, for instance, in croupous pneumonia we will observe a more or less noted increase of polynuclear leucocytes during the fever period, with a subsequent decline of leucocytes with a decrease of temperature. The increase of leucocytes is from 5,000 to 20,000, and the average number of polynuclear leucocytes is from 80° to 82° of the total leucocytes. The polynuclear leucocytes will show a division of the nucleus into three or four nuclei. A similar picture is presented to us in rheumatism, measles, malaria, erysipelas, scarlatina, etc.

The fact of a leucocytosis caused by malignant tumors has been corroborated by Velpeau, Paget, Bouillaud and others, and this fact has been demonstrated in number of cases where prior to an operation for removal of the growth, a leucocytosis existed, which entirely disappeared after the operation. A series of blood examinations of cases embracing carcinomas of the stomach, uterus, mammæ, œsophagus and of epitheliomas of the rectum, penis, lips, etc., showed an increase of leucocytes in each case from 3,000 to 14,000 per mm.

Grawitz in the Deutsche med. Wochenschrift, 1893, reports that injections of carinomous extract into guinea pigs caused a transmission of lymph from the tissues into the blood circulation, thus causing a dilution of the blood, and the subsequent pressure is supposed to permit the escape of a large number of leucocytes from the tissues. According to his theory, we must assume the fact that a leucocytosis will appear in carcinomas as soon as the cancerous substances are resorbed. Investigations on my part have shown me in a number of cases of tumor, that an already existing leucocytosis increased upon the softening of the tumor. In all leucocytoses due to malignant growth we will note an equal increase in mononuclear and polynuclear leucocytes.

Posthemorrhagic leucocytosis occurs fifteen to thirty minutes after all hemorrhages, denoted by an increase of from 6,000 to 15,000 white corpuscles, such increase remaining permanent for some days. Origin of such leucocytosis must be attributed to the thinning of the blood caused by hemorrhage, causing an influx of leucocyte containing lymph and tissue fluid into the circulation.

To determine and classify a leucocytosis influenced by medication is a most difficult task. The presence alone of a leucocytosis, nor the knowledge of medication employed are insufficient information upon which to base a positive diagnosis by means of a blood examination. The differential influence of various therapeutic agents upon the leucocytes is best noted by repeating the results of various investigations.

Hirt (Muller's Archives, 1856, page 174) was the first to note the influence of therapeutic agents upon the number of leucocytes in the blood. He

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noted that the leucocytes increased after the administration of tr. myrrh, tr. amara., tr. cinchona. Meyer (Archive fur experim Pathology and Pharmakology, Vol. 35, page 77) followed Hirt's experiments, and demonstrated the increase of leucocytes after administration of ethereal oils. Binz and Pohl continued researches on the same lines, and amongst the latest investigators we find Lowitt, Witte, Pohl and Winternitz whose experimentations comprised comparative results obtained by administration and subcutaneous injections of extracts prepared from the spleen, thymus, thyroid, bone marrow, etc. The differential results obtained from inorganic and organic medication demonstrated, that although a slight increase in the number of leucocytes occurs after inorganic medication, the mononuclear and polynucleas form prevailed; that the administration of organic remedies is followed by a marked leucocytosis, the lymphocytes being most prominent. My own experimentations corroborated the above facts, and repeated blood examinations of the patients placed on organic remedies, permits with the use of the hot stage to observe the full stages of karyokinesis. The trend of modern medicine is in the direction of organic therapy, and we have learned that organic therapy is an important factor in the physiological function of the cell nucleus, which from observation, appears to be necessary to the formation and building up of organic matter. With the aid of the microscope, with advanced knowledge in pathology, physiology and bacteriology, we have learned to know that non-nucleated cells, although capable of living, are not capable of reproduction, and we must look to the nncleus as the seat of functional activity of the cell, or, indeed, of the entire organism. Confronted with such facts corroborated in the best laboratories of both continents, we must appreciate the volume of information leading to a correct diagnosis, which may be obtained by blood examinations, the examiner having been previously supplied with a short history of the case, including hygienic surroundings, diet, medication, etc.

In order to definitely and finally determine as to the classification or cause of leucocytosis, it is of the utmost importance to undertake the chemical and pathological examination of the urine. Differentiation as to the class and amount of phosphates found in the urine is an important factor in this direction. Thus, in a digestive leucocytosis, in a leucocytosis caused by inflammation, or a leucocytosis due to malignant tumor, we will note an excess of phosphates in the urine, consisting of the earthy phosphates, in a leucocytosis influenced by medication, if such medication was administered upon rational lines, we will find a normal quantity of phosphates, while the other leucocytoses herein mentioned will show an increase in the triple phosphates.

The destruction of the nucleus of the leucocytes will cause the appearance of earthy phosphates in the urine in abnormal quantities, and, therefore, if we are unable to demonstrate by staining processes that leucocytosis is due to histological changes within the leucocyte, and we subsequently have this corroborated by the finding of earthy phosphates in the urine, we are at once confronted with the demand of rational therapy to replace the organic phosphates, which through destructive processes have been elimin-

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ated in the urine. Since this fact has been established by research work in the various laboratories of both continents, we have learned to give more consideration to the treatment of disease with organic remedies, and this especially refers to nuclein.

In the everyday practice of the physician, we have to deal with cases, the majority of which eliminate urine showing an abnormal amount of phosphates, and it is in all such cases where the phosphatic elimination consists of the earthy phosphates, that nuclein medication is indicated. The efficacy of nuclein (P., D. & Co.) in such cases is demonstrated within twenty-four hours after nuclein medication, when an examination of the urine will reveal a decrease in the phosphates, and where an examination of the blood will reveal that the number of lymphocytes is the predominant number of white corpuscles within the blood.

From the foregoing, it seems to be thoroughly demonstrated that in order to determine the cause of leucocytosis, it appears rational that physicians should not rely solely upon an examination of the blood, but should also obtain an analysis, both chemical and pathological, of the urine, in order to arrive at a correct diagnosis.

❧❧❧

Pepto-Mangan and the Breitenbach Fire.—The many prescribers of pepto-mangan (Gude), who have recognized that the recent fire, which demolished the depot of the M. J. Breitenbach Co., temporarily worked great inconvenience to the manufacturers of a favorite remedy, need not be urged to be even more than usually insistent on getting the original product. In spite of unauthorized representations that the fire has cut off the supply, the market is in fact sufficiently supplied to meet the demands for the present. It would seem that manufacturers of similar preparations, and of *imitations*, would be possessed of enough of the finer sense of propriety that they would not use the Breitenbach Company's misfortune, or select such a time to attack this firm. One concern has already done this, however, and we are very much mistaken in the medical profession if the effort does not prove abortive of the result desired by those who fathered it. There is only one Gude's pepto-mangan, and the profession *knows* it, it is unquestionably honestly presented to the profession and the profession *knows* that; our knowledge should also cover those who endeavor to profit by the misfortune of others, and a justly deserved rebuke should be administered.

Prostatic Pain Following Gonorrhea.—

℞ Tinct. aconiti ..... ℥j
Tinct. gelsemii .....
Antipyrini .....aa ℥ij
Ext. ergotæ fluidi ..... ℥j
Aquæ, q. s. ad ..... ℥vj

M. Sig.: A dessertspoonful every two or three hours in a wineglassful of water.

E. R. Corson recommends a combination similar to the above in treatment of prostatitis.—*Jour. A. M. A.*

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Reports on Progress.

COMPRISING THE REGULAR CONTRIBUTORS OF THE FORTNIGHTLY DEPARTMENT STAFF

NEUROLOGY.

BY FRANK PARSONS NORBURY, M. D,

AND EGBERT W. FELL, B. S..

JACKSONVILLE, ILL.

A Case of Crossed Paralysis (Myers, *Canad. Pract. and Rev.*, September, 1900).—Patient male, aged 66, family and previous history negative, except that he had an attack of la grippe with severe nervous symptoms several years ago, recovery finally being perfect. Present trouble began suddenly with complete paralysis of right arm without loss of consciousness, which improved during the same day. Some time after this a complete left facial paralysis occurred. The paralysis was limited to the muscles supplied by the facial nerve, there was no interference with movements of the tongue or secretion of saliva. Taste was unaffected, and there was no paralysis of the soft palate. Eyes were normal. At the time of this attack the paralysis of the right arm had disappeared and only slight weakness remained. A single lesion in the pons would first be thought of as explaining both paralyses, but the transient nature of the paralysis of the arm makes this highly improbable, as an occlusion of one of the mesal branches of the basilor would have results much more permanent. The question of a tumor in this region also arises, but the proximity of the nuclei of the abducens and auditory nerves makes it improbable that the facial could be involved without them. The optic discs showed no evidence of brain tumor, nor did any of the physical symptoms. As a lesion in the pons is thus excluded the symptoms must be accounted for by separate lesions. The temporary paralysis of the arm was probably due to a partial closure of the median parietal branch of the left middle cerebrac artery, causing anemia of the arm centre on the left side, which resulted in loss of function until anastomoses could be established. The age of the patient strengthens this theory. In regard to the facial paralysis, the absence of evidence of implication of the chorda tympani shows that the lesion must be peripheral to the point where it is given off. The reaction of the muscles to the faradic current would indicate that the lesion was a peripheral neuritis.

Autointoxication in Epilepsy.—(Editorial *International Med. Journal*. —In the Bulletin of the Laboratory of Mount Hope Retreat, Baltimore, appears a paper by Dr. Charles C. Hill, entitled "The Pathology of Epilepsy, with an Introduction to a New Treatment." Mount Hope Retreat seems to be one of the hospitals in the United States in which it is the rule

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to base the diagnosis and treatment of obscure disease upon a proper investigation of all the organs, including the stomach and liver, and to search for possible latent conditions of disturbed metabolism by exhaustive analyses of the urine, including the tests for the total acidity, urea, uric acid, the phosphates, chloride, etc., as well as for indican, the etheral sulphates, acetone and other toxic products which are frequently the unsuspected causes of disease. An institution in which such conscientious and thorough work is done deserves well both of the profession and lay public. Dr. Hill assumes that in epilepsy there always exists some permanent lesion of the cortex which is the predisposing cause of the spasms, and he inclines to the hypothesis that the exciting cause, which must also be presupposed, is usually a condition of cerebral hyperemia resulting from a gradual accumulation in the blood of toxins formed in the alimentary tract. The cause of the hyperemia he thinks is probably "the contraction of the arterioles of the viscera commencing in the portal system, thus driving the blood to the brain." It is upon this hypothesis that he bases a new treatment of epilepsy. In support of this view he adduces numerous well-attested physiologic facts, for the statement of which we have not room here, but the following results of urinary examinations made at the Retreat in the cases studied by Dr. Hill are worthy of reproduction: "(1) Prior to and immediately after the spasm there was a marked decrease in the total solids eliminated, which decrease is due principally to a reduction in the amount of urea. (2) Prior to and immediately after the spasm there was a marked increase in the ethereal sulphates, pointing to increased intestinal putrefaction. (3) The ammonia in the urine was usually high prior to and after the spasm. (4) After the spasm the phosphoric acid was increased." Hertes and Smith also report having observed an increase in the ethereal sulphates under like conditions. Voisin and Jeron, by a series of experiments, which are confirmatory of the brilliant work done in this field by Bouchard, demonstrated that the toxicity of the urine of the epileptics is low just before and during a spasm, but is decidedly increased after the spasm. All of this tends to prove that autointoxication from the alimentary tract is a frequent exciting cause of epileptic attacks, as of so many other chronic diseases.

Gastric Atony.—

℞ Liquor potassii arsenitis..... .... ℥ss
Tincr. nucis vomicæ..... ℥i
Vita Aurantii (Haber), q. s. ad..... ℥vj
M. S. A dessertspoonful in water after each meal (three daily).

Urticaria.—

℞ Ethylis alcoholis.....
Etheris sulphurici.....
Chloroformis.....aa ℥i
Mentholis..... gr. ii
M. Sig.: Apply as a lotion.—Gaucher, *Med. Record.*

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The Medical Fortnightly.

Issued Tenth and Twenty-fifth of Every Month by the Fortnightly Press Co.

UNDER THE EDITORIAL DIRECTION OF

FRANK PARSONS NORBURY, M. D. AND THOS. A. HOPKINS, M. D.

Secretary: CHARLES WOOD FASSETT, M. D.

A COSMOPOLITAN BIWEEKLY FOR THE GENERAL PRACTITIONER

Editorial Offices in St. Louis, Chicago, Cincinnati, Jacksonville, St. Joseph, Kansas City, and Pueblo, where specimen copies may be obtained and subscriptions will be taken.

Address all business communications to the Fortnightly Press Company.

Address all contributions and books for review to the Editors, Suite 312, Century Building, Saint Louis.

Volume XVIII DECEMBER TWENTY-FIFTH Number 12

Editorial Department.

Why Prepare for an Inferior Profession when a Superior is Offered?

A MEDICAL student in the editor's office received a circular letter from The Classen Mfg. Co., Des Moines, Ia., urging him to accept the agency for the famous featherbone underskirts, etc. On the envelope enclosing the circular letter, in red ink, appears the advertisement of the S. S. Still College and Infirmary of Osteopathy, the greatest college of osteopathy in existence. In addition to the circular letter is enclosed a small folder with S. S. Still College (in red ink) on one side, with featherbone skirts on the reverse side. On the *Still* side, appears the following: "Why Prepare for an Inferior Profession when a Superior is Offered?" Here we have a mixed breed—a new idea in advertising—a new way of approaching students; a new way of getting in touch with young men who have their own way to make in the world. We can see no other motive for combining underskirt advertisements and osteopathy. It is a peculiar mixture to say the least, and at once gives to Still's concern an unsavory flavor, a flavor of commercialism akin to selling town lots and setter-pups in one glaring red-inked scare-head hand-bill.

But as to the question, why prepare for an inferior profession when a superior is offered? If this question was directed to the young man to whom the circular was addressed, we know his answer, because he is no fool. But if directed to some of the mortal youth seeking for something to turn up that has about it an air of apparent respectability; a chance to appear learned and with great return for a little investment, then, perhaps, a note due when the crop is harvested would be exchanged for tuition fees at this, the greatest emporium of leg pulling in Iowa. Featherbone underskirt would not be sold for a great length of time, but instead the time would be employed in going through the motions of getting learned, growing a beard, cultivating the art of looking wise and acquiring some familiarity with a few stock expressions about nerve centers, joints, dislocations, etc., etc., to be used *ad libitum* in the presence of the supposedly afflicted individual. Then a diploma lithographed, loaded with a seal that looks like a tin-plate, is given as evidence that the youth is qualified to heal the sick, instead of selling uuderskirts, and that he has

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the right of way over all comers. In short, he is a *superior* man, and can shoot the chutes, dance the serpentine, and play "big Injun," just to suit his fancy. Ah! but he has a noble profession—a superior profession—he is an osteopath, and great guns, he can now tie his destiny to a comet, for he is bound to shine. F. P. N.

The Suprarenal Gland as a Remedy in Epilepsy.

REFERRING to a paper on this subject, by Dr. Hill, the editor of the *International Journal of Surgery* says: He describes the promising new treatment of epilepsy devised by himself, including the use of suprarenal extract internally in combination with calcium chlorid and small doses of sodium bromid. After much experimentation, he settled upon the following method of administering these remedies:

One ounce of the powdered gland is treated with 200 c.c. of glycerin and 30 c.c. of water for forty-eight hours, and as a preservative, sufficient biniodid of mercury is added—one-twentieth grain to one grain of the powder. The mixture is then filtered and water added, until one grain of the powdered gland is represented by one dram of the solution. To each dram of this two grains of calcium chlorid are added, to assist in the elimination of the carbonic acid, and five grains of sodium bromid to neutralize the carbonade of ammonia. Such a one-dram dose of this solution is given three times a day, and a purgative once a week. No special diet is prescribed, yet by this treatment much better results have been obtained than under old methods. After using it in the Retreat for a year, Dr. Hill reports that in every case there has been a marked decrease in the number of spasms and more especially an mprovement in the temper and general health. One very quarrelsome and almost unmanageable epileptic who had four to six attacks every month, in spite of the usual treatment, improved wonderfully in intelligence under the new method, and went thirty-three days without any convulsion when the change of treatment was first made. The seizures were then further and further apart, and finally became so mild as to attract almost no attention. Other cases which had averaged a convulsion every week have since had only one in three months; but the doctor is most enthusiastic as to results in bringing up the mental and nerve tone. Such a consequence is in marked contrast to the steady deterioration always produced by the continued use of full doses of the bromids. Dr. Hill is hopeful that by the end of two years he may be able to report the definite cure of cases of epilepsy by the new method.

DR. R. HARVEY REED has been elected a member of the legislature of Wyoming by a handsome majority.

DR. SOLOMON CLAIBORNE MARTIN, JR., has removed his office to the Vista Block, corner of Grand and Franklin Avenues.

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Our City Institutions.

IN his address before the Ethical Society, on November 18th, Mr. W. L. Sheldon gave that society and the public generally the benefit of his tour of inspection of our city institutions. While the deplorable condition of affairs in so far as hospitals are concerned is well known to the medical profession, we are glad to quote from Mr. Sheldon, as reported in the daily press, and to add a hearty amen to his appeal for investigation and discussion, in the hope that better things may result; there is no excuse for existing conditions and indifference on the part of public makes them possible. The following is a part of Mr. Sheldon's report:

"It should be the duty of every citizen to know about the institutions of his city, and of every clergyman to see them personally and know of them from the inside. With this thought in mind, I went through all these institutions this last week, and it gave me some strange experiences. My first excursion was to the Female Hospital, beautifully located opposite Forest Park. There I found 212 patients in the charge of eight physicians. It was encouraging to see that they had one new department fully equipped and up to date—the maternity branch, built about four years ago. On the other hand, it was disheartening that they are still forced to mix the patients all together —the honest and unworthy being forced into intimate companionship for weeks at a time. And still worse it is that they have no separate building for contagious diseases. They had treated 2,300 cases last year at a cost of $61,000.

"I went afterwards to the stately pile of buildings we call the Poor House. But the name is a misnomer. In the rear was a long wooden shed or barracks, where they house the 502 male paupers, while in the other building originally intended for them, I found some 869 cases of the hopelessly insane, who had been crowded out of the Insane Asylum and turned in here for the rest of their days. Happily, there is a separate building for the 267 female poor, and on one floor. I saw the poor house hospital, but there was no medical supervisor. The 1632 inmates, including the 869 insane, are in the care of just three young physicians, not one of whom—capable as they surely are —has been three years out of a medical school. We expended last year on that institution the sum of $148,000, but without more money it can be no credit to St. Louis.

"With the Insane Asylum I was delighted and astonished, comparing it with what I had seen there some twelve years ago. The recent management has simply transformed the institution. The music of the piano was sounding in the corridors, played by the inmates, innocent games going on, house plants in the windows, everything about the place artistic and attractive, and suggestive of hope. And yet—that building was erected for 350 patients, while on that day it held 670 inmates in care of only thirty-nine nurses, with some of the patients sleeping on mattresses on the floor. It cost last year $100,000. Surely they should have $25,000 more and a new wing added besides to the building.

"In the heart of St. Louis I found an old, dilapidated rookery, called "Temporary City Hospital." It was an appalling sight. Just 462 patients were housed there that day. I stumbled through narrow, dimly lighted corridors, went through long wards so poorly lighted that I could scarcely see across the room; in some wards with fifty or sixty patients, where there were only thirty beds; and ceilings in long wards so low I could probably have touched them with a walking stick; the young doctors housed three to a single bed room, which was scarcely large enough for one person; walls unpainted as if it were a stable. Yet twenty-five brave doctors and twenty-five brave nurses have been doing their best there now for four years. But it is

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not a pleasing spectacle to contemplate. We expended there last year $130,000 for 9,536 patients. It should have been at least $175,000.

"The Health Department and dispensary at the old city hall were equally depressing when I saw them. They handled in that one location last year 49,000 cases, representing at least 40,000 individual persons. They expended there at least $132,000, with a force of 103 employes. But the place is unsightly, unfit for its purposes, and utterly unworthy of a great city. St. Louis should have a larger independent new building for its Health Department."

We sincerely hope that Mr. Sheldon's report will bear fruit, that many of our representative citizens will verify his statement, and that the consequent agitation will bring the means to make our charitable institutions an honor to our city; they come far short of being such now. T. A. H.

FOUR STATES, Colorado, Illinois, Louisiana and Massachusetts, have passed laws making it unlawful to sell cocaine without the prescription of a licensed physician or surgeon.

SEVENTY-ONE per cent of the medical freshmen in the University of Pennsylvania have been matriculates at some college or university. In the law department fifty-seven per cent are college men.

COLLEGES OF PHARMACY are decidedly a creation of the nineteenth century. In 1812 no college of pharmacy existed in London, and it was not until 1844 that laboratory work was added to colleges then existing in the English capital.

ADVERTISING THOUGHT FOR DECEMBER.—It is difficult and disagreeable for a publisher to raise the advertising rates on an old customer. Here is a typical medical journal case. An advertiser gives a publisher, who guarantees a circulation of 10.000 copies, a contract for $200 for one page a year. The contract is renewed, say, three consecutive years, when the next renewing time comes around the publisher tells the advertiser, that his circulation during the three past years has been steadily increasing and that now he can guarantee a regular issue of 20,000 copies, and that in view of this increased service he must ask $300 for another year. The advertiser, of course, objects, which is natural, as in a business way no one should pay more for anything than he is obliged to. If the publisher is firm and will not recede or compromise, in about fifty cases out of one hundred, the advertiser will not renew; that is about the average. The publisher contends that the advertiser in getting 100 per cent increase service —20,000 circulation, against 10,000 for only 50 per cent extra cost. The advertiser replies that he took the prospects of the journal's increase into consideration when agreeing to the original price. The arguments on both sides are interminable. However, one cannot get around the fact that it costs the publisher considerably more money to publish 20,000 copies than it did 10,000 and that if all his patrons paid him only on the basis of 10,000 he could not profitably exist; also, that if uniform prices are obtained from every one the publishers' advertising department is on a much sounder basis and a much more favorable rate for all can be established.—*Alkaloidal Clinic.*

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TORONTO PHYSICIANS' PROTECTIVE ASSOCIATION.—Medical organization throughout the United States is rapidly becoming a matter of practical importance. In Detroit and elsewhere protective associations have been formed for the avowed purpose of bettering the lot and welfare of the physician. In Detroit, over four hundred members of the profession have signed the roll of the organization, which is stated to be working satisfactorily and harmoniously. Shorn of trade-unionism and boycotts, it will prove a powerful factor for good in the profession, and result in the correction of evils and disabilities in that city which will make life worth living. Although nothing definite has been done towards a similar end in the City of Toronto, or in any of the other cities or towns in the Dominion that we are aware of, there is some quiet talk going on amongst the profession in Toronto which will soon result in definite steps being taken in the direction of the organization of such an association, designed for the purpose of correcting abuses which exist here, as well as in Detroit and elsewhere, and, it may be, to a more alarming and disconcerting extent than in our neighboring city to the west. It must be apparent and manifest to all that the profession of medicine is drifting woefully, and tnat it is high time that we were up and doing if we are going to hang together as a substantial section of the community. In no other walk of life are the abuses and burdens more flagrant and depressing than those of which the profession of medicine is the victim. We have even descended to the degrading position of having our charges fixed by our patients, in many instances—a procedure which is fast gaining ground, and a procedure to which even the humblest tradesman is not subjected. A great mass of the public have become seized of the idea that it is not necessary to pay for a doctor, and that the law will uphold them in the contention. If an association were formed on broad professional and ethical lines, on the broad line of probity and honor, much good could be accomplished, both financially and professionally. Let us at once get to work and do something for ourselves, else we will be crowded out and left in the race after an ordinary livelihood. Let us organize and live up to the tenets of our organization. Let us become more "business" and less "professional."—*Dominion Medical Monthly.*

MEDICAL ADVICE BY TELEPHONE.—Husband: My wife has a severe pain in the back of her neck, and complains of a sort of soreness in the stomach.

Physician: She has malaria-colic.

Husband: What shall I do for her?

The girl at the Central switches off to a machinist talking to a sawmill man.

Machinist to Husband: I think she is covered with scales one inch thick. Draw off her water and let her cool off during the night, and before she fires up in the morning, clean out her flue and pound her thoroughly; then take a hose, hitch it to a fire plug and wash her out. Do not crowd her too much, as she is liable to blow off.

Husband has no further use for this doctor.—*Factotum.*

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The Reviewer's Table.

Books, Reprints, and Instruments for this department, should be sent to the Editors, St. Louis

MEDICAL NEWS VISITING LIST—1901—LEA BROTHERS & CO, Philadelphia and New York. 1900. $1.25 net.

THIS is an old friend to many practitioners, and to those who are not familiar with its excellent features it is time they were making their acquaintance. It contains 32 pages of data needed by every practitioner, viz.: Tables on metric system; eruptive fevers; doses; therapeutic reminders; ligation of arteries, etc., and blanks for recording clinical and financial data. It is published in four styles, viz.: weekly, dated, for 30 patients; monthly, undated, for 120 patients per month; perpetual, undated, for 30 patients, weekly, and 60 patients, undated and without the preliminary data.

SAUNDERS' QUESTION COMPENDS—ESSENTIALS OF HISTOLOGY. By Louis Leroy, B. S., M. D., Professor of Histology and Pathology in Vanderbilt University; City Bacteriologist to Nashville, Tenn.; Bacteriologist to the State of Tennessee, etc. Arranged with questions following each chapter. 72 illustrations. Cloth, $1.00 net. Philadelphia, W. B. Saunders & Company, 1900.

THIS new number among Saunders' Question Compends is a valuable addition to the series. The subject-matter is ably handled, though necessarily condensed the condensation has not been allowed to obscure the facts stated, or to cut off the side lights essential to their intelligibility. As a hand-book in connection with the work of the lecture-room it will largely obviate the taking of notes. It will also be found a helpful preparatory work to the study of pathology. This will be appreciated by physicians as well as by students.

THE STUDENT'S MEDICAL DICTIONARY, Including All the Words and Phrases Generally Used in Medicine, with Their Proper Pronunciation and Definitions, Based on Recent Medical Literature. By GEORGE M. GOULD, A. M., M. D., Author of "An Illustrated Dictionary of Medicine, Biology and Allied Sciences;" Editor "Philadelphia Medical Journal." Eleventh edition, enlarged, with many illustrations. Philadelphia: P. BLAKISTON'S SONS & COMPANY, 1012 Walnut street. 1900. $2.50.

WE have used Gould's Dictionary as a desk companion for several years and have learned its value. It is the standard, and one which has won recognition in England as well as in this country. Gould is the American authority on medical philology. He understands well the student's needs, and in this the eleventh edition of the Student's Dictionary, has incorporated all of the features of especial service to students. Pronunciation is one of the leading features, and the novel method used by Dr. Gould is of great help to both student and practitioner. It is simple, so that "he who runs may read." In addition to the valuable and reliable service it renders as a dictionary, are the tables of bacilli, micrococci, leucomains and ptomains, weights and measures, etc., etc.; new table of eponymic terms and tests. This book, as now published, is one of the most complete ever issued, and truly meets the "lexicographic demands of the student and the practising physician."

F. P. N.

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A REFERENCE HANDBOOK OF THE MEDICAL SCIENCES. Embracing the Entire Range of Scientific and Practical Medicine and Allied Science. By Various Writers. A new edition, completely revised and rewritten. Edited by ALBERT H. BUCK, M. D., New York: WILLIAM WOOD & CO. 1900.

IN THE wide range of medical literature there is no publication in the English language comparable to this superb work, especially in completeness, magnitude or in book construction. That it is a work of merit appreciated by the profession is attested by the fact, that since the publication of the first edition, in 1884, it has been the standard work of reference of the medical profession, and has had an enormous sale. For twelve years the reviewer has had the pleasure and profit of its service in his library, and has looked upon it as an indispensable companion. The new edition is, therefore, greatly welcomed, and it is superb. It has been thoroughly revised, as is shown by the method pursued by the editor, viz.: All the articles of the existing nine volumes were collected together in groups, each of which represented a special department of medical knowledge. Each group of articles was then entrusted to a competent specialist in that particular branch; he examined carefully his material, and when the finished reports came in, it was decided that over half of the text had to be rewritten. This fact, as the editor well says, "illustrates the changes that have occurred in medical knowledge during the past fifteen years." The editor is fortunate in bringing to his assistance such an array of notable contributors. Among those contributing to Volume I are some of the strongest medical writers and original investigators of modern times, men who have made American medicine what it is. The editor is to be congratulated in getting this help which gives to this work its high authority. It is fully illustrated, and Vol. I contains 498 half-tone and wood engravings and numerous chromo-lithographs. This edition of the Reference Handbook of the Medical Sciences will consist of eight splendid imperial octavo volumes, thoroughly illustrated. The pages are of large size, printed in double columns, and the type will be as small as can be comfortably read by a person of ordinary good eyesight. It will be seen from the foregoing that the volumes admit of the introduction of an enormous amount of reading matter, each page carrying by actual count as many words as are found upon three and one-half ordinary full octavo pages. It should also be noted that the concise, definite, terse style of composition, compulsory upon contributors to this work, immeasurably increases its value, both in the saving of the busy man's time, and also in the largely increased amount of matter thus made possible in the given space. Those who owned the original edition and learned by actual experience how much valuable information was to be gleaned from its pages in regard to a very great number of topics, will find that the list of these has been markedly increased, and that the information furnished is thoroughly up to date. On the other hand, those who now make their first acquaintance with the Handbook, and will take the trouble to use it habitually when they desire information upon any point, will soon come to realize that they possess a veritable library of reference. Prices at which this work will be sold per volume: In extra English muslin binding, $7.00; in fine leather, raised bands, $8.00; in extra Turkey Morocco, English cloth sides, $9.00.

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Delivered at any regular express company's office in the United States at the above price. (Local or stage charges only to be paid by subscriber.) The publishers respectfully give notice to the medical profession that this work cannot be sold by them at less than the prices printed above, and consequently it will not be supplied by the trade, nor will the volumes be sold separately. From trustworthy subscribers, payment upon the instalment plan will be accepted.

WE find in consultation practice that the clinical study of children is one of the neglected branches of medicine. In the common practice of the day it comes to diagnosis of disease in a child "any old thing will do.' This is wrong, and if we had more books like Williams there would be more familiarity with the child in disease and more real clinical interest shown in these helpless creatures. The author has fully carried out what the preface says he intended to do, viz., to indicate the special incidence of disease in childhood; to elucidate, as far as possible, the causes of this special incidence; to point out the peculiarities which the circumstauces of child-life impress upon familiar diseases and to detail the treatment rendered appropriate by the nature of the disease itself, and by the peculiar susceptibility of the growing organism. The American editor, Churchill of Chicago, has carefully revised the last edition to adapt it more clearly to the wants of this country, especial attention being given to infant-feeding. We believe this volume a valuable one for the young practitioner, to be studied thoughtfully, and then it is ready for reference when needed.

MEDICAL DISEASES OF INFANCY AND CHILDHOOD, by DAWSON WILLIAMS, M. D., Fellow of the Royal College of Physicians of London and University College, London: Physician to East Indian Hospital for children. Second edition, revised with additions by FRANK S. CHURCHILL, M. D., Chicago, Instructor in Diseases of Children, Rush Medical College. Philadelphia: LEA BROTHERS & CO. 1900.

F. P. N.

THIS book is representative of the teachings in the newer pathology and bacteriology of today. It is a valuable book, well written, concise, and presents the practical clinical features of pathology. The student finds what he needs without undue elaboration. Bacteriology is discussed in a chapter of about one hundred pages. In it are discussed diseases of known bacteriological origin. With the multiplicity of recent good works on pathology Stengel will rank with the foremost, because of its excellent illustrations, practical clinical application of the facts of pathology; its excellent treatment of neuro-pathology (which, by the way, is the work of Dr. Jos. Sailer) and its chapter on bacteriology.

A TEXT BOOK OF PATHOLOGY. Edited by ALFRED STENGEL, M. D., Professor of Clinical Medicine in the University of Pennsylvania; Physician to the Philadelphia Hospital; Physician to the Children's Hospital, Philadelphia, etc. Philadelphia and London: W. B. SAUNDERS & CO.

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Original Department.

PAPERS for the Original Department should be in hand one month in advance, and contributed to THE MEDICAL FORTNIGHTLY exclusively. A liberal number of extra copies will be furnished authors, and reprints may be obtained at reasonable rates, if request accompanies the manuscript. Engravings from photographs furnished free.

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Signature of contributor, for reproduction, should be sent with every article, on a separate slip; use heavy ink, and allow autograph to dry without applying blotter.

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Observations Based on the Probable Mode of Formation of Urinary Stone Relative to its Recurrence and Prevention.

BY REGINALD HARRISON, F. R. C. S.,

LONDON, ENGLAND.

Surgeon to St. Peter's Hospital.

In an article which appeared in the Lancet, Nov. 12, 1898, entitled "a further contribution to the Surgery of Stone in the Bladder," I endeavored to illustrate how progressive this work had been during the latter period of the expiring century, and how intimately this was associated with the general adoption of the method of operating which Bigelow originated in 1878 and has since been known by the name of litholapaxy.

I then purposely left for further consideraion the only feature connected with this class of operations which seemed to require amendment or improvement. I refer to the liability to recurrence after operation, which is admittedly larger after crushing as compared with other methods for removing stone from the bladder, though the mortality of the former is considerably less.

In the previous paper referred to there were 101 cases of stone operated upon by litholapaxy alone, in addition to other methods. Of this number there were 6 deaths, whilst in 23 recurrence in some degree happened. The average age of these 23 persons was a fraction over 63 years. Several of the recurrences only amounted to the formation of some phosphatic gravel mixed

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with tenacious mucous which was readily removed by the wash-bottle and aspirator.

Seventeen of these persons had considerable enlargement of the prostate. Twelve had pouched bladders and the same number were more or less permanently dependent upon their catheters at the time of operation. In two instances it seemed probable that recurrence was due to fresh descents of stones from the kidney and their retention within the bladder by the large prostate. In one of the fatal instances recurrence was due to a pouched bladder complicated with a neglected urethral stricture and chronic suppurative nephritis.

From this statement it is clear that the class of cases where the tendency to recurrence is greatest and most difficult to deal with, subsequent to the primary operation, is that in which before stone formed the bladder was more or less functionally and structurally spoilt by the obstruction it had been submitted to by enlargement of the prostate.

It is hardly necessary to enumerate atony or loss of muscular power to expel urine, saccing, pouching, trabeculation and cystitis, as being amongst these commoner effects.

It is in its application to this class of cases, with this liability, which seems in some degree to discredit the crushing operation in the eyes of the profession and public. Mr. Cadge in 1886, referred to this in the following terms: "This seems a heavy indictment to bring against lithotrity, but I am afraid there is no gainsaying it. Many of these relapses might be prevented if the patients would observe directions and perserve with treatment."*

I shall endeavor to show in detail, later on, how we may succeed in giving effect to the latter statement.

On the other hand in otherwise healthy persons without these prostatic and other defects the liability to recurrence of calculus in the bladder after operation is extremely small as also shown in the previous paper, and may usually be accounted for by the unexpected descent of a fresh nucleus from the kidney in the form of a small urate or oxalate stone. This is a cause for recurrence which applies equally to lithotomy as well as to lithotrity however performed.

The information we now mostly require relative to the removal of primary stone from the bladder under the conditions first mentioned of more or less permanent catheter-dependence and prostatic obstruction, is not so much as to how quickly this operation can be effected, or how speedily convalescence follows, but as to what happens within the twelve months or thereabouts immediately succeeding it and concurrent with the abnormal states of the parts referred to.

* Hunterian Lectures. Royal College Surgeons.

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The object of this paper is relative to the former class of cases from which the greater proportion of stone recurrences after operation are drawn, and to show what has been done recently to diminish this tendency in them and upon what principle or lines this may now be successfully attempted. In this way we hope to lessen this liability and so to proportionately increase the efficiency of treatment.

For it seems to be a more reasonable proposal to endeavor to extend the scope of an operation attended with so much to recommend it and so small a mortality than to substitute a more serious proceeding. Though lithotomy may be necessary for special reasons connected with the size or hardness of a stone or for other considerations, I can hardly see how its mortality apart from other drawbacks is likely to be diminished in the future having regard to the advanced age, and enfeebled powers of the persons upon whom it is usually practised. A repeated litholapaxy or a substituted lithotomy are in no sense comparable in elderly or feeble people.

I purpose therefore dealing with the class of cases noticed as being most prone to recurrence. I will arrange my remarks under three headings: (1) The local treatment of the bladder following litholapaxy. (2) Preventive treatment based upon the mode in which it is assumed urinary calculi are formed. (3) Some illustrative cases.

PART I.

THE LOCAL TREATMENT OF THE BLADDER FOLLOWING LITHOLAPAXY.

For some time past I have acted on the rule of regarding all cases operated upon for stone as "suspicious" until sufficient time has elapsed to free them from this imputation. This, as I have urged, is the more necessary in cases when the normal functions of the bladder are impaired by prostatic obstructions. Here personal supervision should be carried on for some time after the individuals have passed from the hands of the operating surgeon into those of the usual medical adviser.

Such observation should have reference to the fact that there is a period in the history of all stones forming in the bladder as well as in others where the nuclei descend from the kidneys in the shape of small calculi, when they would have escaped through an ordinary adult catheter as used for normal dimensions. Hence when the condition of the urine after an operation remains abnormal ,or unexpectedly becomes so, as indicated by appearance, smell or microscopic examination, the bladder should be carefully attended to until such states are either explained or removed.

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Tentatively even under these circumstances, or for moving and withdrawing minute concretions or calculi, which would soon develop into larger stones and before they have furnished full evidence of their presence, the bladder should be washed out as for exploration.

Direct evidence of the necessity for this is often furnished by the withdrawal of a number of small phosphatic concretions, or other crystalline bodies which on examination with a magnifying glass may be seen arranging themselves so as eventually to form distinct conglomerations of calculous material.

By reference to the plates illustrating Sir Everard Home's lectures (Vol. VI) minute crystals of uric acid may be seen held together by wavy shreds of mucous in course of consolidation by the process described by Rainey and which will be again referred to later on, of molecular coalescence. These are frequently met with and may be readily recognized. If not removed they are sure forerunner of stone.

To effect their removal a suitable syringe and catheter are required. I have tried many kinds of the former and other apparatus used for washing out the bladder, but the best is a metal syringe made to fit various sizes of catheters. This should work easily without jerking and with sufficient power for the purpose. The syringes I refer to are not liable to get out of order and can be readily rendered and kept aseptic.

The best catheters are the larger sized, smooth bored, silk web ones with an ample bevelled eye. The larger the instrument the better, so long as it will enter the bladder without causing pain or too much tension. It is convenient to have the end somewhat funnel shaped so as to readily and accurately fit the conical nozzle of the syringe.

For injecting, warm water, preferably soft water, answers this purpose very well. If the urine is offensive boracic acid sanitas, or a solution of permanganate of potash may be added. Whatever is used, should be used freely. From two to four pints at one seance or even more may be injected in installments, once or twice a day, the object being to dislodge any concretions that pouces or sacs may contain and to obtain a perfectly clear return fluid. Hence the object should be to sluice the bladder rather than wash it in the ordinary acceptation of the term.

I have often found it satisfactory to fill the bladder fairly full and then to cause the patient to lie or roll on his stomach. By this, and such like devices concretions may often be got rid of in considerable quantities. In some cases when the bladder is sacculated and to make doubly sure, it is well to wash out occasionally with the ordinary evacuation catheter and aspirator as used for re-

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moving debris after litholapaxy which will also be found a test or sound as to the presence of any calculous concretion that may be unable to escape through the eye of an ordinary flexible catheter.

By attention such as is here indicated the bladder becomes gradually less liable to form these concretions as I shall show when I refer later on to some illustrative cases.

When the mucous membrane remains relaxed and spongy as evidenced by an excess of mucous in the urine, which is often met with in bladders that have held stones for considerable periods, it is well after the usual sluicing has been finished to conclude the process by injecting two or three times a week, a couple of ounces of a solution of silver nitrate (gr. iad oz. xii). This may be increased in strength provided it causes no pain. It is the best astringent for this purpose, but its utility is often marred by being used too strong. It is well to leave this quantity of the solution in the bladder after it has been emptied of the water or lotion previously used. By this means as I illustrated in a previous paper, the process of molecular coalescence may be interfered with.

It is not possible to indicate precisely how long the local measures described must be continued or repeated. The absence or presence of the symptoms referred to individual cases must determine thees points. I will therefore pass on to the second portion of my subject, which may be utilized concurrently with what has been described.

(To be Continued.)

THREE of the ex-presidents of the American Medical Association died in September. Dr. Hunter Holmes McGuire, September 18, age 65 years, an eminent surgeon and a man beloved by people of his section. Dr. Lewis Albert Sayre, "the father of orthopedic surgery," died September 21, age 80 years. Dr. Alfred Stille, died September 24th, age 87 years.

POSTPONEMENT OF THE THIRD PAN-AMERICAN MEDICAL CONGRESS—The Committee of the Third Pan-American Medical Congress met in special session on the 4th inst., at the Marine-Hospital Bureau in Washington, and, after consultation with Surgeon-General Wyman, decided, on account of the present health conditions in Havana, to postpone the congress until Feb. 5, next. Dr. Juan Santos Fernandez, of Havana, president of the congress, advised the postponement by cable. This delay, it is hoped, will increase the attendance and extend the work of the congress. Signed Drs. A. Van der Veer, C. A. L. Reed, H. L. E. Johnson, Ramon Guiteras.

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Athetosis, with Report of Case.

BY EMERSON M. SUTTON, M. D.,

PEORIA, ILL.

Read before the Military Tract Medical Society, Kewanee, Ill.

Mr. J. P., Elmwood, Ill., aged 40; married; farmer; general health good. Father is living and well except for hernia and some heart trouble. Father has no nervous disease, neither has the mother, who is living. There are three brothers living and well. But one of them had cholera. One brother died from some throat trouble.

When the patient was 14 years old he had "brain fever", followed by partial paralysis of the right arm and leg, characterized by loss of control, and by clonic spasms. This never extended to any other part of the body. The trouble began in the flexors of the wrist. In 1898 a surgeon divided the tendons to the arm, and to slight extent to the calves of leg same side.

At school he learned slowly but had a good memory, and is a successful farmer.

About a year and a half before presenting himself to me, the patient was thrown from a wagon in a runaway and received a scalp wound on the left side of his head, which was patched up with court plaster. It healed quickly without pain, or any symptom of brain injury. There is now a scar below the parietal bone, extending about two inches across the suture, 2½ inches above the left ear. Since the accident, however, the disease has grown rapidly worse, most powerful contraction taking place during the waking hours, almost every fifteen minutes, and also waking patient at night.

These spasms come with the least excitement and involve the flexors of the arm and hand, extensors of the big toe and flexors of the foot. They last for two or three minutes. The arm is now kept on a straight board splint, which extends from the arm pit to beyond the ends of the fingers and a sole leather cast tightly laced to the arm, a bandage over these. The finger tips are straightened out by a powerful pressure, sores over the tips of phalanges are beginning to form, and the nails are suppurating. For two or three days before a storm the spasms are constant and the paid due to them much worse. Excitement acts in a similar way.

Upon trepanning, pigmented spots were found over the cortical areas for hand, arm, shoulder and leg, and spasms could be induced by stimulation with the mild faradic current. Removal of the cortical substance was considered, but lacking precedent, it was not done. The dura was united and wound closed.

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Two weeks later: After a prompt recovery from the trepanning operation, the patient was chloroformed, the axillia opened, and all the main nerve trunks of the cortical plexus exposed and divided, one or two inches of each being excised. The result was as wished for, a paralysis of the arm and complete relief from the spasms. The patient is now working about the farm, using the shoulder muscles to throw the arm about. Three years since the operation, no bad consequences having developed, I record the case as a successful treatment of an incurable affection, which was accompanied with such distress that the patient was driven to a despondent and hopeless condition of mind; death had no terrors, while amputation at the shoulder was desired and sought for by the patient himself.

I have copied the following brief literature upon the disease from Eskridge's article in Sajous' Annual, which gives a better presentation of the affection than I could otherwise give.

Athetosis.—A nervous disorder characterized by involuntary movements of the fingers and toes, apparently of a uniform and systematic character. It may be partial, affecting a limited portion of the body, or general, the movements being widespread. The latter form is also termed "idiopathic".

The striking peculiarity of the disease, first described by W. A. Hammond of New York, is that the parts concerned in the spasmodic movements, usually the fingers and toes of the one side, are constantly moving, though to a limited degree, during sleep, independently of the patient's will. The fingers are alternately flexed and extended with varying degrees of abduction and adduction, and with a tendency to distortion. The movements are not always limited to the fingers and toes, however, the muscles of the arm and leg, and sometimes those of the face taking part in the spasmodic seizures in a small proportion of the cases. In these cases the arm is swung to and fro in regular rythmic movements and the alternate contractions and relaxation of the facial muscles give rise to grimaces. These movements are often preceded, or accompanied by, other symptoms of cerebral disease, especially epileptic seizures and impairment of the intellect. This occurs most frequently in middle aged men of intemperate habits. Hemianesthesia and other perversions of sensation are often present.

The idiopathic form is generally bilateral; the gait is characteristic in the majority of cases. They seem constantly on the point of falling, while violent contortions of the entire extremities occur simultaneously.

The etiology of this affection is obscure. Falls, compression of the head during birth, cerebral hemorrhage, fright, alcoholism, syphilis, and cerebral growths are among the most prominent factors. Heredity has been clearly ascertained in a number of cases.

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Case of bilateral athetosis in a man 43 years, formerly insane, and addicted to alcohol, in whom the disease developed gradually, beginning at the extremities, and later on involving the neck and face, and finally accompanied by complete aphasia.. F. Parsons Norbury (Med. Fortnightly, April 15, 1892). (This case is interesting, as it shows that double athetosis is not always accompanied by imbecility, and that it does not always date from early infancy. Bourneville and Sollier, Assoc. Edrs. Annual '93.)

Athetosis is closely allied to posthemiplegic chorea, and is usually due to some lesion of the optic thalamus—a thrombus or tumor and particularly to embolism. Autopsy of case upon which W. A. Hammond's description of the disorder was based: The portion involved in the lesion had consisted of fibrous connective tissue. Topographically, the lesion was a lengthy one in the antero-posterior diameter, parallel in its short axis with the internal capsule. Its posterior end had invaded the statum zonale of the thalamus on its posterior third and the posterior half of the internal capsule. In its interior extension it had crossed the capsule, invading the posterior third of the outer lenticulus. The author called attention to the fact that this case was further evidence of his theory that athetosis was caused by irritation of the thalamus, the striatum, or the cortex, and not by a lesio nof the motor tract. G. M. Hammond (Boston Med and Surg. Journal. July 17, '90).

Lesions of the lenticular nucleus have also been found, consisting mainly in softening. The motor regions of the cortex are thought, by some observers, to at least be implicated in the pathological process. The lesion of athetosis is undoubtedly in the cortex of the brain, and that the best success may be obtained from galvanism there and also to the head.

Four cases of hemi-athetosis in which the movements ceased during profound sleep, but persisted to a slight degree during light sleep, tending to indicate that the point of origin of the movements of athetosis lies in motor regions of the cerebral cortex, although many autopsies have shown a lesion of the anterior portion of the internal capsule in such cases.

There is no absolute difference between athetosis and posthemiplegic chorea. If the lesion be acute, hemichorea is produced; if chronic hemi-anthetosis. In chorea the movements are sudden and involuntary; in athetosis they are slow, and ordinarily do not interfere with voluntary acts, except to lessen their rapidity. In the present case the patient would use his left hand to slowly straighten out the contracted hand and arm.

Although this disease is regarded as incurable, functional cases have been reported in which arsenic and iron, with bromide oi potassium, have brought about satisfactory results. The galvanic current, the positive pole being placed over the brachial

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plexus and the negative on the neck, have been recommended by Krafft-Ebing. Hammond has obtained good results from nerve stretching. Treatment lasting six weeks, and consisting of one and one-half drachms of bromide of potassium daily, and the stabile application of the galvanic current of 2 milliamperes, the positive pole on the brachial plexus, the negative on the neck, brought about a temporary cure which would have probably been permanent had the treatment been continued longer. Krafft Ebing (Wiener klin. Woch. April 18, 1889).

Marked case in which three months' rest in the hospital, electrical treatment, and the administration of codliver oil, arsenic and iron improved affected muscles very much.

Strychnine was found to increase the rigidity. Since leaving the hospital, however, the paralysis and wasting have made steady progress. Michael Clarke (Bristol Medico-Chir. Jour., June, '97).

In my case it is shown that hemiplegia occurring in youth gave rise to the chorea and later athetosis.

A Leaf from a Montana Physician's Diary.

BY JAMES E. FREE, M. D.,

BILLINGS, MONTANA.

Just how the physician feels when a desperate case has him at bay is a perennially interesting question.

What the world needs, to supply a long felt want, is usually a real idea pulled up by the roots; out of the cortex cerebri. We often ask for an idea and are given an opinion, with the husk on. An amateur may take a brush and worry a canvass for weeks, and the result is not a masterpiece. It lacks high light, harmony, timber, perspective individuality, and sympathetic treatment. The only thing it does not lack is paint.

A man who had no art in his soul stood watching a landscape artist, through a knot hole in the fence. He thought she was putting too many haystacks into the picture per acre; but while he withdrew his gaze to congratulate himself upon being farmer-born, the artist put tails to the haystacks; and a bunch of sheep made him wonder what the price of wool would be next season. Suggestiveness is one of the values of true art.

An ordinary head appears to be big enough to hold the Encyclopedia Brittannica in solution. Think of a man being able to contain such a fund of information. The pyramids of Egypt are the only things, which required more labor to complete them. And yet too often the heir of all the ages allows a single thought to assume the proportins of a banyan tree, and crowd everything else out of his mind.

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Naturalists tell us there is no more sensation connected with cutting a fish worm in two than there is in cutting off the train to a woman's dress. The worm crawls off both ways at once, as if he had taken cocaine, but the woman, what does she do? Cato the Censor has left us a description of his statesmanship, which concerned itself with the liberties of females. It is the old Roman's opinion, that a Papal bull would only make them determined to wear less clothes than ever to social functions.

Medical men are called, like preachers. It is hard on the Lord and the cat, to say you would not have Dr. So an So attend your cat. The actual truth may be the Doctor would much prefer to attend the cat. Still with fine chivalry he obeys the summons to see a sick man. In five minutes he has sacked the citadel of error, and extracted a confession from the wife, to the effect, that the old man laid around the house with a bacon rind and a piece of red flannel on his gozzle, for a week, before taking to his bed. And further, only last night he threatened, if he was not feeling better in the morning he would swallow a teaspoonful of coal oil, followed by a lighted match and a Seidlitz powder to work it off. This same man once sent for the Doctor to take care of him when he had the smallpox. The Doctor caught the disease and when they both got well he sent in his bill for fifty dollars, which was promptly returned with a request to be credited with fifty dollars worth of smallpox furnished the Doctor.

All the satisfaction the Doctor ever got was the reflection, that having a disease gives a man a chance to brag about it afterwards; and furnishes more experience than a barrel of lectures by specialists, who vaccinate themselves every time an epidemic appears, for fear their vast knowledge of the subject may strike in. It reminds me of an old bachelor delivering a course of lectures on the results of getting married.

Underneath the mask of professional dignity the real man is hidden. When he goes home he runs around in his stocking feet, spits on the carpet, winds up the clock and falls to wondering what medicine was in that bottle he prescribed for his patient. Somehow the bottle got wet and the label has come off. In desperation he ties a silk handkerchief around his headache center, and goes into his den for a dose of coal tar derivative, only to find the box is empty. There is nothing for it but to hitch up and drive four miles to see if the patient is dead yet. Gee whiz! Everything some men lay their hands on, is gone in this world. The blinds to the sick chamber have not been drawn, and the Doctor on his arrival at the house, in the dead of night sees a sight which chills him to the marrow. The old man is sitting up in bed eating cold roast sweet potato, while his faithful wife stands by the bedside with a pitcher of buttermilk, saying: "Ye shall not surely die if ye eat." Knowledge gained in this way is empiric; because the medical man cannot remember exactly what it was he prescribed.

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Again the Doctor has a case of scarlet fever. The little girl is emaciated by fever and medicine, until she wears the pinched expression of a boiled hambone. Latterly she is vomiting blood. Her parents were schoolmates of his. When the little boy across the street had the diphtheria it was this girl's mother who made the splendid tackle an hour before the crisis, which saved the day for his credit. It nettles him now to see symptoms of indecision, when the friends of the other fellow try to stampede the parents. That stubborn look, which is interpreted as a refusal to bet either way, precipitates the inevitable consultation. How it grinds to hear afterwards, that the first man killed the patient.

"Et tu Brute." is all that can be said. Ever been there, Doctor? Let's shake hands.

HEALTH AND REST.—Among the many institutions whose object is perfect rest and physical and mental recuperation, none ranks more highly than the Alma Sanitarium, Alma, Michigan. Situated in a region unsurpassed in healthful conditoins, the establishment offers every conceivable facilvity in the way of superior equipment, sources of recreation and skillful and assiduous treatment. A leading feature of the institution—which of itself would guarantee perfect recovery in many cases of invalidism—is its inexhaustible supply of Nature's remedy known as Alma bromo water. This remarkable bromide possesses properties unshared by other similar productions of nature, being a peculiarly efficient laxative, and, as an ingredient of the bath, wonderfully efefctual in the treatment of chronic rheumatism, while as an excellent sedative in nervous skin diseases, experience has proved it to be absolutely without an equal. The Park Mineral Spring is highly efficacious, its exhilirating effects being such that it is a popular beverage among guests, who imperceptibly find their mental and bodily powers renewed under its peculiar influence. Even those not requiring medical treatment, but who resort to the Sanitarium to enjoy its provisions for freedom from care and ideal rest, find themselves notably reinvigorated by the subtle yet marvelously potent effects of this unique diuretic water. Aside from the signal advantages of the waters above mentioned, the Sanitarium offers the rarest opportunities for healthful recreation and pleasure. The neighboring country affords charming attractions in the way of walks and drives; amusements of every description have been liberally planned, and the general atmosphere of the place is such as to inspire cheerfulness and contentment even among those long prostrated by chronic diseases. The institution is thoroughly equipped in each department having electricity in every form, massage, rest cure, manual and mechanical Swedish movements, and a well equipped gymnasium under a trained director. We do not hesitate to recommend Alma Sanitarium cordially and confidently knowing its high character and the sterling value of its manifold resources as a health resort.

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The Treatment of Fever in Infants.

BY H. M. MCCLANAHAN, M. D.,
OMAHA, NEB.

In order that I may make myself more clearly understood, a few general remarks on the subject of fever may not be out of place.

While we are yet in doubt as to the exact mode of production of animal heat, we do know that the bodily temperature, in health, is constantly maintained under varying conditions of atmospheric environment, and that the range of heat either above or below the normal, compatible with life, is limited to a few degrees. Fever is a morbid condition of the system, characterized by a more or less enduring elevation of the bodily temperature. It is a symptom associated with nearly all diseased conditions. Fever is a symptom more frequently present in infants than in either children or adults, and its effects are more immediately serious. Why this is so, we do not positively know, but it may probably be inferred that it is due to the preponderance of brain tissue over body, and the immaturity of the gray matter, permitting the nerve centers to be more readily disturbed. Because of these conditions, the regularity of the production of heat, which physiologists teach, reside in the nervous system, is less than in the adult. Again, the greater susceptibility of the infant to the invasion of microbes, associated with their feebler resisting power, combine to make them more prone to the development of fever.

Fever is a symptom illustrating the intimate relationship between physiology and pathology. Normal body heat is essential to the performance of the vital functions. Febrile heat is the exaggeration of a normal function, rather than a separate and distinct process.

The causes of fever cannot always be determined. Indeed, many cases come under our care, in which this is the only symptom present. Frequently we are unable to discover any cause for the fever. Modern medical thought is in the direction that fever in the great majority of cases is due to the invasion of the system by pathogenic bacteria, and that the increased heat is induced by the presence of the bacteria, or their products, in the tissues or fluids of the body. That this has been demonstrated to be true in the greater number of cases, does not admit of doubt, but that all fevers are caused in this manner is probably not correct.

In some cases, it seems highly probable that fever is due to imperfect elimination: that is, effete material, the result of tissue matabolism circulating in the blood, acts as an irritant to the nerve centers. This theory seems very probable in the case of infants, and will satisfactorily explain many acute cases of fever, because of the immatured cell life, and the rapid growth of the tissues, very

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trivial causes being sufficient to disturb the relation betwen nutrition and elimination.

It is a curious fact, well established, by clinical observation, that mental emotions, as fear, anger, grief and joy, rarely induce fever, but that mental disturbances in those suffering from fever, frequently produce an acute exacerbation. Even in infants I am satisfied that the same thing applies. Who has not seen a child suffering from fever, made worse by being annoyed by the presence in the sick room of officious friends.

Fever does not always imply the increased production of animal heat, but may be due to decreased elimination. While heat is constantly being elaborated within the various tissues of the body, it is also regularly being dissipated from the body. Undoubtedly, many acute cases of fever are due to the disturbance of this relationship.

With these preliminary remarks, we may proceed to the discussion of the subject of Treatment of Fevers.

All fevers do not require treatment. Indeed, many are overtreated. Therefore, we may reasonably inquire what are the indications for treatment, when we should interfere and when desist. It is not alone the degree of fever that we should take into consideration, but even more important is the continuance of the fever, and the influence of increased temperature upon the nervous system. The injurious effect of fever upon the nervous system is, to my mind, the most important reason for instituting treatment to reduce the temperature.

Infants vary greatly in their immunity to the effect of fever. The degre of febrile heat that in one infant may have no dilatarious effect, in another, may cause most alarming symptoms. It will consequently follow that in one case we may feel it to be our duty to institute energetic modes of treatment designed to reduce temperature, whereas, in another case, we can safely desist from any active treatment.

Upon the subject of treatment, I have nothing new to suggest. On the contrary, I wish to urge the application of old remedies, and to sound a note of warning against the indiscriminate use of drugs in the treatment of fever in infants. The increasing experience of each succeeding year, more and more convinces me of the efficacy of water in the treatment of fever. The technique of hydrotherapy will vary somewhat from that in the adult. Greater care must be taken not to induce shock or excite fear. An efficacious mode of applying water in the treatment of fever in infants, is by intestinal irrigation. In carrying out this treatment, it is better for the mother or nurse to place the infant upon her lap, as its movements can be more readily controlled. A rubber cloth, covered by a sheet, is spread across the lap; the end reaching to the floor, can be placed ina wash bowl or other receptacle; a soft rubber catheter is attach-

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ed to the nozzle of the fountain syringe, which should be hung about four feet above the child. One or two pints of warm water may be poured into the receptacle, and the catheter inserted into the bowels. As the water flows, cold water is gradually to be added. I think this prevents any undue shock to the child, and I am certain it lessens the resistance of the child to the application of the treatment. The practical point is to retain from half a pint to a pint of the cold water in the bowel long enough for the water to absorb the body heat. In order to accomplish this, it will be necessary to exert firm pressure upon either side of the buttocks. It is just here that this method of treatment so often fails to reduce temperature, for the water is expelled from the bowel before the has been time to extract the heat. Again, a considerable quantity of water is required. I should say from one to two gallons. With care this mode of treatment is not painful to the patient, and is very certain in its results. For instance, I saw a child ten days old, on the night of May 29, 1900. Its temperature per rectum, was 106½. It had had one convulsion before my arrival and had another after I saw it, before I had time to begin any treatment. In that case I used about 6 quarts of water, beginning with the water at the body temperature. . Within an hour after the commencement of treatment, the child was resting quietly, free from nervous symptoms, with a temperature of 100.

Another mode of treatment that in some cases is even better, is the sheet pack. With infants, in order to prevent shock, I think it is better, after the patient's clothing has been removed, to wrap it in a sheet dipped in warm water. This is to be carefully and smoothly wrapped about the child. Over this a second sheet wrung out of cold water, is to be applied. After the application of the second sheet, gentle friction with the hand, to prevent capillary engorgement, is indicated. In the application of this treatment, two symptoms should be constantly kept in mind. One is the character of the breathing, and the other is the tendency to cyanosis. Should the breathing become irregular, or the lips blue, during the application of this treatment, the child is to be removed from the pack, and placed between warm blankets. When the outer sheet becomes slightly warm, cool water can be poured, or better still, rubbed over by means of a sponge. The important things to be remembered are the constant rubbing, to keep up the cutaneous circulation, and the constant addition of cold water. The application of this treatment will usually require from 10 to 15 minutes. At the end of this time the child is to be rubbed until the skin is dry and has a good, healthy glow. It is then to be placed in a warm bed. The repetition of this treatment will, of course, depend upon the recurrence of fever, and its influence upon the patient. In many of the acute, febrile attacks that we are called to see, one tratment is sufficient. In cases where the fever has been compli-

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cated by convulsions, it is always best after the child has been placed in bed, to apply cold cloths to the head, or to use a water bag for a pillow, and at the same time to apply heat in the form of hot water bottles or bags to the feet.

Another method of treatment that is of benefit in certain cases, is the cooled bath. This is of especial benefit in scarlet fever with a high temperature. With young children, an ordinary wash boiler is sufficient. This is to be filled half full of water at about a temperature of a hundred, as nearly as can be determined, and over the body of the boiler, a sheet is to be spread. The patient, with clothing removed, is placed upon the sheet, and gently immersed into the water. When the body is covered up to the neck, constant friction with the open hand is to be made over the trunk and extremities. After the child has been in the bath two or three minutes, and has become accustomed to its surroundings, the water can be cooled down to 70 or 80 degrees by simply dipping out a quart of water, and adding a quart of cold water. During this process, the constant friction of the body is to be continued. The duration of this bath may be from 8 to 12 minutes. At the expiration of this time, the patient is gently rubbed, dried and placed between warm blankets.

I have thus far spoken only of the treatment of fever with a view to the reduction of bodily heat. In all cases, it is understood that we attempt to remove the cause of the fever. As I have already indicated, in a large number of cases we are in doubt as to the cause and therefore we have to treat the patient symptomatically. In a large number of cases, in infants the fever is due to some gastro intestinal disturbance. In these cases, we naturally apply remedies directed to correcting the condition of the stomach and bowels, and the treatment required will suggest itself in each case.

One point I think worth mentioning is the withdrawal of food for some hours. In many of these cases of high temperature in infants, the digestive functions are in abeyance and food acts not only as an irritant to the stomach, but it is highly probable that, owing to imperfect digestion, fermentation and other retrograde changes take place in this way adding fuel to the flame.

The use of drugs simply to reduce fever, will in many cases, not be required, and in all cases, great care is necessary. I will admit, however, that there are some cases where in addition to the treatment already indicated, high temperature persists, and we are compelled to resort to drugs. In my judgment, the best is phenacetine. Where this is left to be given by the mother at her discretion, it is a wise precaution to instruct her that should there be any blueness of the lips, to stop the remedy. In cases of extreme restlessness, I think that chloral hydrate given in one grain doses every half hour for three or four times, to children of a year of age, is excellent. In infants of six months, half a grain may be given.

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In many cases it will be found that the urine is highly colored and extremely acid, and that we can materially assist in controlling the temperature by stimulating the function of the kidneys ,is true. To meet this indication, there is no remedy equal to citrate of potassium. This can be given in doses of from 3 to 5 grains, largely diluted in water. I saw a case during the summer of a child about six months old, where fever had persisted for a number of days in spite of treatment. The urine, as far as could be judged, was very scanty, highly colored, and upon testing on litmus paper, was very acid. I placed this child upon the alkaline treatment indicated, with a result that in two days the temperature had fallen to normal.

To recapitulate briefly, the treatment of fever in infants is to be governed by the effect of the fever upon the patient, and is to be given when positively necessary, and their effects carefully watched. Withdraw all milk food for twelve hours or longer, studying carefully the condition of the stomach and bowels. Keep the patient quiet, and the results will be satisfactory equally to physicians and patients.

The Story of Elisha, M. D.

BY DAVID W.

It was a hot summer day. The prophet Elisha was walking past the village school house, with Elijah's newly acquired mantle swung over his shoulder, fanning himself with his hat. There were forty-three children present that day, and all were out for recess except Eliazar Jr., the youngest son of the high priest, who had been kept in for whispering. The teacher was busy with a love letter, and did not allow her mind to be diverted by the antics of young Elizar in the back part of the room. Leaning out of the window, and seeing the venerable prophet's shining pate, the young scapegrace waited till the owner turned his back, and then sung out "Bald head" and disappeared within the window.

All great men have their weak points, and this was Elisha's. He had been for years afflicted with alopecia senilis. He had used Simon's hair vigor and Jeremiah's capillary restorer without effect. He had in his pocket a letter from a Jerusalem drug store telling him that the Alopecine company, limited, had exploded, and that the drug store could not refund the fifty cents he had paid to them on a written guarantee for cure in thirty days or money refunded. Elisha was in an irritable frame of mind. What was the good of Elijah's mantle if it could not protect him from such wrongs and insults. If Elisha had been a greater man he would have ignored the children. If he had been a better one

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he would have forgiven them; perhaps the drug men also. Instead of this he began to curse the children. Elisha was much given to swearing in spite of his gray hairs, or his lack of them, rather. He always swore in Bible language, but it was swearing all the same. This was against the rules, and the children ran to tell the teacher, but she was busy writing a letter. She was to be married at the end of the term, and didn't care whether school kept or not.

When Elisha got through swearing he went over to the Board of Trade, and sent up two bears to corner the children. Eliazar Jr. looked out of the window and saw the bears coming and slid the bolt in the door. Besides, bears or no bears, it was against the rules for the children to come in till the bell rang. Miss Esther heard the children screaming, but thought it was the girls playing tag. and went on with her writing. Eliazar saw the bears devouring the children, and snapped his fingers till they ached, and said, "Please may I speak?" But Miss Esther said that if he didn't keep still she'd keep him in after school, and went on with her letter. Eliazar settled himself to his problem: 42 children from 43 children leaves how many children?

The grand jury got hold of the matter, brought in an indictment against Elisha, charging him among other things, with keeping trained bears which were a menace to the peace and safety of the community. At the trial Elisha proved an alibi, and several other things that the jury did not know the names of. He brought his bears into court and showed to the jury how harmless they were, and how hungry they looked, and how wide they could open their mouths, and how fiercely they could growl. The jury was convinced and brought in a verdict of Not Guilty. As some report of the case had to be sent to King Ahab, the court chronicler wrote, "And the Lord sent two she bears, etc." There is almost no ground for this accusation, but it was the customary way of shifting responsibility in those days. The accused not thinking it worth while to reply and no court or competent jurisdiction being found, the case, as usual, was dropped.

Elisha's crabbed disposition made him more enemies than friends. He followed Elijah when he was sick and looking for a place to die. Elijah tried to send him back, for he knew he was after his old clothes, but Elisha swore every time he tried to get rid of him. "As the Lord liveth," etc. Elisha had many adventures illustrating this unkindly disposition, but the bear episode is the one we like best to read about. Next after this comes the healing of Naaman the leper and especially the unhealing of Gehazi.

Gehazi was Elisha's servant. His wages were in arrears and whenever he asked Elisha for money to take his girl to the

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theater, Elisha said he was broke, and he didn't believe in theaters anyway. Gehazi was smart enough to see that although his master might get great glory as a prophet by dividing the river Jordan, and making his enemies blind, and by foretelling the price of a measure of barley a day ahead of the market, there was nothing in it for himself, so he persuaded Elisha to hang out his shingle and go into the practice of medicine. Doctors used to get rich in those days. Double entry bookkeeping had not been invented, and sheep skin and papyrus had not come into use among the profession. To be sure they only charged a penny for knocking a man's tooth out, but it was a penny, not a mere scratch on a day book, that would have to be embalmed and buried in a ledger, there to await the resurrection of the just, for every doctor is willing to swear that all the occupants of his ledger are just. Prices were very unequal. They would kill a poor man in those days, for almost nothing, but they would confiscate the entire property of a rich devisee, and drag his family into slavery. They always took just what they could lay their hands on, and let the rest go. They never booked anything. The doctors did not know how to write, and did not care to learn. Surgery was rude in those days but effective. Decapitation was often performed without an anaesthetic. Jael effectually cured a headache, by driving a nail into her patient's temple. Laparotomy was usually performed with a sword. Balm of Gilead was the only surgical dressing used, and electricity and painless dentistry were relegated to the quacks. They were not up in the treatment of gunshot wounds,, but were adepts in the artificial production of widows and orphans.

Let us return to Elisha, as the king said when his chill came back on the third day. After a few successes, such as restoring the Shunamite's son to life, and antidoting a mess of deadly pottage Elisha—but wait; let's tell about that pottage:

Gehazi was getting tired of hardtack, and thought he would like some mushrooms. He took down Elisha's medical books and began the study of botany. He read the first hundred pages of the beginner's hand book on mushrooms, describing three hundred species of edible fungi so accurately that "any fool might feel safe in eating them." Gehazi did not observe the sarcasm of the words, and was about to turn the page when company came in and Elisha sent him to forage for dinner. Elisha picked up the book and saw from the thumb marks just how far Gehazi had read. He turned the page and began "but beware, for there are three hundred species exactly like them that are deadly poison. What shall we say then. Shall a man eat mushrooms that he die? Yea, verily, for what is life without mushrooms? If a man chew mushrooms and die, the end of that man is sad, for he will

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eat no more mushrooms. But if a man eschew mushrooms, he also will some day die, and eat no mushrooms. So what doth it profit him? The end of the man is the same." Elisha shipped the next fifty pages, till he came to "Treatment."

Gehazi found plenty of mushrooms, "and gathered thereof his lap full, and came and shered them into the pottage. So they poured out for the men to eat. And it came to pass as they were eating the pottage, that they cried out, "there is death in the pot!" Elisha was ready. He hadn't eaten any of the pottage. Gehazi also had scruples about eating till the guests were satisfied. Elisha dipped a gourd full of anti-muscarine into the pot, and made them eat the rest of the pottage. This cured them.

The young men went out and told how Gehazi had tried to poison them, and how Elisha had saved their lives. Gehazi wrote it up in their case book, and had it published in II. Kings, Chap. iv.

"And the king talked with Gehazi, saying, tell me, I pray thee, all the great things that Elisha hath done. And it came to pass as he was telling the king how he had restored a dead body to life," etc. Gehazi was a genius. He was worthy of a better master. After a puff like that, if Elisha had stuck to business he could soon have made his fortune, and Gehazi's too.

Elisha's next important case was that of Naaman, the Syrian. Naaman was a great man over in Damascus, and it was a great thing to have him drive up in his chariot, in front of Elisha's office one afternoon, just as the doctor was getting discouraged and was thinking about shutting up office and going fishing. Naaman wanted Elisha to come out to the chariot and hold a pow wow over him and utter incantations, and cure him in that way. You know it is natural to wish to indicate the medicine by which we want to be cured. But Elisha sent Gehaza out with a prescription telling him to bathe in the river Jordan till he got clean. And he thought that would cure him. He said his office was full of home patients, and he hadn't time to spend talking with foreigners.

Of course Naaman was mad. He had a right to be. A patient always feels insulted when the doctor tells him to take fresh air and water or any other medicine he knows the name of. If Elisha had used a little policy, as Gehazi would have done, he'd have had a lot of Jordan water bottled up with sanscrit labels, and have cured Naaman body and mind, then and there. He would have taken all the presents Naaman had brought, and taken his note for the balance.

Elisha had a talent for medicine, and if he had been a little better collector, or had taken Gehazi as a partner and handed over that batch of the business to him, he would soon have made

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a fortune. In fact, it was hard to tell what he was looking for, unless it was trouble. Gehazi was a good collector. He saw his master's weakness and tried to supplement it without hurting his master's feelings. A plunge in the Jordan cooled Naaman's wrath, and when he returned, cured, and wanted to know what his bill was, Elisha indulged in his usual emphatic language and said he wouldn't take a red cent. He wasn't doing a "no cure no pay" business. If his services weren't worth cash in advance he'd go out of the business and live on the interest of his money.

Of course, this was nonsense, and Gehazi knew it. Their financial condition was getting desperate. The office rent was three months in arrears, and the Chinaman held their last change of underwear in soak. Somebody has to lie a little around a doctor's office, and Gehazi was used to doing all the dirty work, so he didn't hesitate a moment. It came to him like an inspiration, though it may have been a sigh of relief. A talent of silver to pay rent and board bill, and two changes of raiment, one for Sunday and one for every day. Gehazi would wear the everyday one. Most physicians think Gehazi was a greater man than his master. When he returned he found Elisha cross as usual. He injected Gehazi with Naaman's castoff leprosy microbes, and drove him from the office, threatening him with appendicitis and cholera morbus if he ever showed himself in Samaria again. Elisha knew that he was in arrears with Gehazi's wages ,and that was the easiest way to settle with him, still, it was hardly just.

Elisha's experience as a prophet should have been a great help to him as a physician. The medical colleges nowadays neglect prophecy. The subject of cure has overshadowed that of prognosis. It is all well enough for the patient to want to be cured, but the doctors have interests at stake as well as the patient. A case of cure is soon forgotten, but a well-managed demise is a subject of record. "Of course a doctor can't cure every case," say the heirs of the deceased, soothingly. All they want is a little warning to prepare them for the change. If a doctor can give this, with confidence, his reputation is secure. Moreover people distrust physicians who lack familiarity with death. When a physician kills a man with colitis or tuberculosis, and it is the same with all the itises and osises, it characterizes him as an adept in the use of that weapon, and immediately a score of friends of the deceased leave their old family doctor to consult this specialist. This is of vastly more importance to the specialist than to be able occasionally to rob death of his prey, in a halting, doubtful manner, not knowing till the last move is made who is to win the game. If I were a doctor I'd rather have a single vial of prophecy than a whole drugstoreful of cures. People object to taking

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medicine, but you can force prophecy down their throat, no matter how bitter. Indeed, they seem to like it.

The sympathetic family doctor frets and worries, and says, "it may be," and, "if I can only," or, "I'll try to," and so implicates himself in the case, that he is hardly distinguishable from the arch foe himself, amid the dust of battle, as he wages an unsuccessful warfare with his great adversary, and withdraws, disappointed and sorrowful; defeated and humiliated. What though he occasionally snatch a victim from the jaws of the grave? He does it in a poor, undignified manner, which hardly merits the small fee he presumes to ask. The graduate in prophecy sees the end from the beginning. He knows what he is giving, and can foretell the result. "It is too late," he says. "If I had been called earlier—", "a dozen doctors could not save him now—" (probably not!) "but I'll do all I can.." he washes his hands from all complicity with death and retires gracefully at his approach. After the funeral he sends in a bill worthy of the occasion.

In the school of the prophets, of which Elisha was a graduate, the young doctor was taught to predict a patient's demise from a week to a year in advance, but it didn't take much study of medicine to enable him to verify his prophecies; especially the medicine they used in those days.

There is a greater demand for speedily verified prophecy in these days than ever before. That's where the older prophets missed it; they dealt too much in futures. Elisha was an exception in this respect. Where other prophets let their bets run over into the next world, Elisha drove with short reins and made a record for quick turns. On one famous occasion, the Syrians on the outside had piled the barley up in a corner so high that a man could not stand on tip-toe, with a dollar bill in one hand and reach a handful of it with the other. Elisha saw the angel spreading in time to be revenged upon his enemies the following day. To a young friend who asked him for a pointer he said, "tomorrow about this time, shall a measure of fine flour be sold for a shekel, and two measures of barley for a shekel in the gate of Samaria."

A man with Elisha's provision could get rich in a dozen different ways nowadays. But somehow those old prophets had no ambition except to stir up trouble or to predict calamity. Just imagine the commotion that Elijah's long beard and supplementary mantle would create, coming into sight at a derby. Just think of the price he could command for a single whispered word. He could stand on the outside of a convention hall and make more money than the man in the inside who was naming "the next president of the United States." On change—well, they have a kind of school of the prophets there, but it often gets out of

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gear, and just as the young prophet is about to graduate with a big bank account, there comes a slump in wheat and before he can scotch the wheels or spread his parachute, the whole machine runs down, with a gurring sound, and the prophet has to begin his education over again.

After the loss of Gehazi, Elisha gave up the practice of medicine and became a disturbing force in politics. He did not aspire to office himself. He saw that there was more money, and infinitely less danger in manipulating a crown than in wearing one. It was Elisha that said, "I'd rather be rich than president." He broke up the corrupt Ahab king ,and overthrew the infamous Jezebel. He held his delegation well together, and nominated Jehu, the son of Jehosephat, king of Israel over all opposition. It speaks well for Jehu's forbearance and sense of gratitude that he let Elisha outlive him, but prophets generally lived longer than kings in those days.

Acute Rheumatism.—A useful lotion to be applied to the inflamed joints on warm lint is that of Dr. Fuller:

℞ Tinct. opii..... dr. i
Potass. carbonatis..... dr. ss
Glycerini..... dr. ij
Aquæ..... dr. ix

The dressing should not be covered by any impermeable material.—*Amer. Text-Book of Applied Therapeutics.*

Spasmodic Cough in Bronchitis.—

℞ Codeinæ..... gr. v
Acidi hydrocyanici dil..... m xl
Acidi phosphorici dil..... oz. i
Syrupi tolutani..... dr. ii
Aquæ, q. s. ad..... dr. iv

M. Sig. One teaspoonful every three or four hours.—*J.A. M.A.*

Retention of Urine.—

℞ Extracti opii..... gr. ij
Extracti hyoscyami..... gr. j
Olei theobromatic..... q. s.

M. Fiant suppositoria No. ii. Sig.: Introduce a suppository into rectum and immerse body in hot bath for half an hour. *Indications:* Used in retention due to swelling and inflammation of urethra in gonorrhea. After the opium and hyoscyamus have been absorbed, a brisk saline purge should be administered and leeches applied to the perineum.

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Reports on Progress.

COMPRISING THE REGULAR CONTRIBUTORS OF THE FORTNIGHTLY DEPARTMENT STAFF

MENTAL AND NERVOUS DISEASES.

BY FRANK PARSONS NORBURY, M. D,

Formerly Resident Physician Pennsylvania Institution for Feeble-Minded Children; Formerly Assistant Physician Illinois Central Hospital for the Insane; Physician to Passavant Memorial Hospital; Physician to the Illinois Institution for the Blind, and Neurologist to Our Savior's Hospital; Lecturer Psycho-Physics, Illinois College.

AND EGBERT W. FELL, B. S.,

JACKSONVILLE, ILL.

Treatment of Migraine.—Hanford, in the *Edinburg Medical Journal*, speaks of the treatment as follows: In cases where the extremities are cold some relief is obtained by warming them at the fire. The attack can, in a large number of cases, be cut short many hours by going to bed, applying hot bottles to the extremities and taking a hot drink as soon as the stomach will retain it. A glow soon pervades the surface and the spleen is relaxed. Sleep is the best completion of the cure, but a good dinner may sometimes take its place. Thirty to sixty grains of potassium bromid may have a good effect. It sometimes happens that a recumbent position will aggravate the pains, and in the last stages moving about sometimes has a better effect than remaining quiet.—From *Gaillard's Med. Jour.*

Musical Equivalents in Epilepsy.—Clark in the *Medical News* of September, 1900, reports two cases. The first in a man aged forty, epilepsy of a grand mal type. Grand mal attacks occur monthly and equivalents weekly. These latter begin with an epigastric aura, then the patient standing or sitting still, with the eyes fixed, begins to sing a gospel tune with improvised words in a very loud voice. The quality of the singing is better than in his normal state. After about twenty seconds the voice becomes lower; perspiration pours off the face, and the face becomes very red. The attack ends abruptly. The patient feels stupid and falls into a profound sleep, waking up in an hour feeling bright and cheerful. There is no remembrance of what happened during the attack. The second case is a girl twenty years old. For a long time all her attacks were of the musical equivaient variety, except two, which were grand mal in type. A peculiar feature of this case is the occurrence of attacks of angina pectoris complicating the singing equivalents. The attacks begin with an epigastric aura, and loss of consciousness is complete. There is a slight oscillation of the head and the eyes are fixed. The singing is always religious, sometimes improvised and sometimes not. She sometimes assumes a passionate attitude and there is often considerable restlessness during the attacks, which may last from twenty to forty minutes.

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Treatment of Epilepsy.—Näcke (*Neurolog. Centralb.*, July 15, 1900) says, that by diminishing the amonnt of chlorid of sodium taken in the food the efficiency of bromides is greatly increased. The most severe cases seem to be the most benefited. A pure milk diet may be employed but the usual diet may be taken, provided it is unsalted. A strictly vegetable diet probably has no special value. This treatment has not been on trial long enough to permit any statement being made regarding a complete cure.—*Inter. Med. Mag.*

Observations on the Treatment of Epilepsy.—Ingils (*Phys. and Surg.*, July, 1900) does not approve of the persistent and indiscriminate use of bromides, because after prolonged use the mental determination resulting is worse than the disease itself. He has had good results from the use of coal-tar products, particularly in cases where bromides after long use have had no effect. In beginning the treatment of new cases it is best to give bromide and chloral for a time, and if this is not effectual the change should be made to the coal-tar products. Acetanilid in five-grain doses three times a day is an ample dose, and this should be decreased to the least amount that will control the convulsions. Many cases of epilepsy are due to reflex causes as abnormal dentition and intestinal worms, and if the disease is not of too long standing may be cured by removal of the cause. Autointoxication may, in individuals who have inherited a neurotic constitution, be the exciting cause of the convulsions. In such cases it is not enough to merely stimulate the liver, kidney and bowels, but the patient should be given exercise in sufficient amount to bring about complete oxidation of his food products. The diet should be restricted, especially the meats and eggs. As to trephining the author says, that unless there is present some gross anatomical lesion, such as a blood clot, a spiculum of bone, or other evident cause of cortical irritation, there is but scant hope for a favorable result.

Headache from Eye strain (Wood, *Med. News*, July 28, 1900).—The site of ocular headaches in order of frequency is as follows: Supra-orbital, deep orbital, fronto-occipital, and temporal. The character of the pain is not peculiar, but is more likely to be dull and heavy than very acute. The supra-orbital form is generally accompanied by aching in the eye-ball and by a deep intercranial ache. Ocular headaches are almost always accompanied by signs and symptoms easily referred to the eyes, and the exciting causes, such as tasks which require the use of the accommodation and convergence, are peculiar, and will help in the diagnosis. For instance, after reading awhile the letters may run together, the sclera may become hyperemic, and the lids show signs of iuflammation. There may be photophobia or specks floating before the eyes. Astigmatism is the most frequent cause and its diagnosis, in the absence of complicated apparatus, can best be made with the visual test card, the astigmatic chart, and Pray's astigmatic letters. Weakness of the extrinsic eye muscles is to some unknown degree the cause of ocular headache. Of headaches that simulate the ocular headaches the most difficult to differentiate is the supraorbital or supranasal pain of nasal disease. In these cases, however, there are usually other

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symptoms, and the pain continues through the night, which does not occur in eye-strain. Supra-orbital malarial neuralgia may be detected by its periodicity and by its being paroxysmal and unilateral, and not accompanied by other asthenopic symptoms. Headaches due to organic disease of the eye are practically incurable. If from acute disease it may be cured by treatment of the acute affection. In the treatment of eye strain proper such conditions as insomnia, dyspepsia, excessive indulgence in tobacco and alcohol should be attended to and pelvic disorders should be looked after. As far as local applications are concerned the use of hot or cold fomentation is the most effective and the least harmful. Spirits of camphor, ointment of veratrine or aconitine, or a liniment containing chloroform, camphor and tincture of aconite frequently give relief. A weak galvanic current may give temporary relief.

Influenza as it Affects the Nervous System (Bury, *Med. News*, September 1, 1900).—Four types of the disease are recognized by the author, according to the systems most affected: (1) The mucous membrane form; (2) the gastro-intestinal form; (3) the cardiac form; (4) the nervous form. There are nervous symptoms, as headache, hyperesthesia and depression present in all cases, but in cases which are predominantly nervous the symptoms may be divided into those (1) of the febrile stage, as meningitis and encephalitis, and (2) those coming on later. In the former a comatose and a delirious type are distinguished. The former being very serious and often ending fatally. At post-mortem a menigo-encephalitis is found with endoarteritis of the vessels of the pia mater. Cerebral embolism, thrombosis and abscess may occur. The cord may be affected with the brain or alone. Generally it is affected after the initial attack, but sometimes during it. In the second group may occur any known disease of the brain, cord or nerves. Unlike the diphtheria toxin it affects the nervous tissue haphazard and not in groups.

The Causes of Some Cases of Neurasthenia and Their Treatment.—Bishop (*Virginia Med. Semi-Mo.*, October 12, 1900) deals particularly with the class of patients who are strong and vigorous physically. In these cases he finds a marked diminution in the amount of urea excreted and an increase in the amount of phosphates. Urea or its antecedents when retained in the body acts as a systemic poison. If in large amount it may cause paralysis of the center of respiration and circulation, convulsions, etc., and if the amount retained is small the nerve centres will show its toxication by slight symptoms, such as we see in neurasthenia. In individuals of sedentary habits and with a good appetite, the nitrogenous waste is not, on account of patabolism in the muscles, converted into urea and excreted as it should be. The excess of phospates shows imperfect anabolism of the brain cells, an imperfect assimilation of the phosporized substances in the food, or an excessive patabolism of the brain aud nerve cells. The cells of the brain cortex and gray matter of the cord are shrunken, their nutrition interfered with, and they receive and transmit false impressions, giving us the various symptoms found in this disorder. Metabolism takes place extensively in the muscles, and in order to secure their stimula-

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tion without the fatigue which follows exercise the author uses electricity. First he passes a gentle galvanic current through the cervical sympathetic, follows it by a general galvanization of the body, and then treats the patient to a static spray.

Unreasoning Fear and Its Physical Basis. (Editorial in *Med. News*, August 25, 1900.)—Emotionalism has its foundation not in any perversion or defect of the moral nature, but in the physical constitution. The man who hesitates before daring to cross an open square is suffering from a nervous condition which canses his visual reflexes to react upon and disturb not only his mental but his physical equilibrium. The mechanism of coordination is a complicated one, and in neurotic persons the disturbance produced in the visual reflexes by looking only at distant objects may be sufficient to cause tremor and a halting gait. In this condition we have an exaggerated condition of unreasoning fear, milder degrees of which are common, as fear of darkness, of lightning, etc. The realization of the physical basis of such fears, the treatment of the patient's general condition, training in mental control, and training the patient to become accustomed to the reflexes which are the cause of his particular trouble will do much to relieve the unpleasant condition.

The Curability of Inebriety by Medical Treatment.—(Crothers, *Virginia Med. Semi-Mo.*, October 12, 1900)—Thirty to forty cases recover under hospital treatment. Inebriety is now recognized as a distinct neurosis in which there are certain defects of growth and development that produce a susceptibility to the action of alcohol. The drinking of alcohol is not the disease but the symptoms of some central irritation and of poisoning and starvation. The medical treatment must be based upon some clear conception of the nature of the disease and the conditions present. The complete removal of all spirits at the beginning is followed by the best results. The reaction which follows can be neutralized by the use of strychnine or sodium bromide in large doses. A calomel or saline purge should be given and followed by a prolonged hot air or hot water bath with vigorous massage. In this way the ptomaines may be removed; and the second indication, that of starvation, should be met by food and tonics. The removal of spirits in all cases reveals conditions of physical and mental degeneration that calls for a great variety of therapeutic measures. The next question is to ascertain the special exciting causes and remove them: overwork, neglect of hygienic care of the body, irregularity in habits, emotional excitements and depressions, etc. Before a cure can be said to be complete the underlying cause which produces the craving for the anesthetic and stimulating effects of alcohol must be neutralized and prevented. In certain cases the attacks are preceded by premonitory symptoms and purges and prolonged baths are of great value. Quassia often does good. After the drink paroxysm has passed away changes should be made in the diet and living, and constitutional remedies are to be used. Narcotics are to be avoided. Strychnia in large doses, frequently repeated, then discontinued for awhile seems to be the most efficient. Iron, phosphorus, arsenic, potassium and the bitter tonics should be used alternately. Whether treatment will be most effectual at home or in a hospital depends on the case. Most cases can be best treated in a hospital or asylum.

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Discursive Notes as to the Management of the Insane.—(Stone, *Amer. Pracl. and News*, August 1, 1900.)—Fear of family disgrace should not deter the friends or guardian of a patieut in the incipient stages of mental disease from securing treatment for him, as it is in this stage that there is most chance of good being done. The proper use of diuretics, purgatives, nerve tonics and soporifics may remove an incipient mental disease, which, if left alone, would soon become chronic. Often nothing can be done as to specific treatment until violence, restlessness, insomnia have been removed. Hypnotics should not, however, be used unless absolutely necessary. The food should be easily digestible, such as milk and eggs. Egg-nog and milk punch are often useful both as food and as soporifics. Liqnid foods may be forcibly given, if uecessary. Tonics, as quinine, iron, strychnine, and arsenic are called for. Exercise, fresh air and occupation of some sort are very useful. Change of scenery is good in some cases, but travel is often harmful on acconnt of the excitement and irregular habits of eating and sleeping. It is best to try home treatment at first, as in case of recovery it mitigates the sense of disgrace in the mind of the patient. A nurse should be with the patient constantly. If it is necessary to send the patient to an asylum on account of poverty, or on account of violence or other cause, the iustitution should possess all the conveniences, appointments and environments necessary for the comfort and proper treatment of such cases. Food should be of the best quality, water pure, etc. Medical treatment should be of the best, and patients should not be put into the hands of a tyro in mental experience.

Spinal Injuries from Railroad Accidents.—(Sinkler, *Virginia Med. Semi-Mo.*, August 10, 1900.)—These are of two classes: First, organic, resulting from direct trauma, wrenching or extreme bending of the cord or injuries to the nerves. Spinal meningitis, myelitis, spinal hemorrhage and lateral sclerosis are the most frequent and are readily recognized by their peculiar features. Second, are those cases classed as railway spine, railway shock and Ericksen's disease. These symptoms may come on some time after direct injury to the spine, or after injury to other parts of the body. There are two theories as to the pathology of these neuroses: First, that concussion of the spine results in molecular changes or anemia of the cord, or a mild meningitis or myelitis; and second, that all the symptoms are due to functional disturbance. The latter view is generally accepted. The majority of cases of the second class present symptoms either of traumatic neurasthenia or traumatic hysteria. The principal features of traumatic neurasthenia are: An easily exhausted muscular system with lack of recuperative action; self-conscicusness and introspection, mental depression in some cases being almost melancholic; vaso-motor disturbances, as rapid heart, sweating, flushing, etc.; insomnia; pain, stiffness, and tenderness to pressure over the spine with rigidity in the lumbar region. Thus it differs from the non-traumatic form only in the lumbar stiffness and tender points over the spine, and these are not invariably present. Traumatic hysteria occurs in persous of a more marked neurotic nature than those who develop traumatic neurasthenia. The only difier-

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ence between traumatic and non-traumatic hysteria is, that in the former an injury is likely to direct the patient's attention to that part, and this is more likely to be the seat of paralysis, contractures, anesthesias, hyperesthesias, etc. The influence of expectancy in traumatic neuroses is potent. The slight injury which the patient may have received and his unconscious desire to make his case as stroug as possible makes the patient's thoughts turn strongly to himself. He stops work because he does not feel well, becomes more self-centered and his symptoms become accentuated. Simulation is uncommon, but in a great many cases the phenomena are grossly exagerated usually no doubt, unconsciously. Out and out malingering does, however, occur, and only the most careful examination will enable one to detect it.

TYPHOID FEVER is reported to have broken ont in Sing Sing Prison. Typhoid has become epidemic in Fort Collins, Colo.

A PHYSICIAN AS SECRETARY OF STATE.—Dr. C. R. Layton, a practising physician of Georgetown, Md., has been appointed secretary of state by the newly elected governor.

MUMMY WHEAT WILL NOT GERMINATE.—It is now definitely shown that the wheat found with mummies has long since lost the power of growing. The pictures which were published some years ago showing what was supposed to be wheat grown from seed found with mummies are now pronounced fake illustrations.

MEDICAL DEFENSE.—As it has become almost epidemic to be sued for civil malpractice, and, from a close observation of the kind and class of patients who bring these suits, through, as a rule, indigent and half-starved lawyers, we are prepared, as a profession, to welcome to our ranks the Physicians' Guarantee Company, of Fort Wayne, Indiana. This company has been legally organized under the laws of Indiana, it has ample capital and a cash reserve fund of $50,000, thus rendering every contract it issues as safe in the hands of the holder as a National bank-note. This company is organized wholly for the purpose of going into the fleld and fighting suits brought against physicians and surgeons for clvil malpractice. It has supplied itself with legal data along this line that has cost a great deal to accumulate; its corps of attorneys are experts in this particular fleld, and we strongly urge the profession to avail itself of the kind and class of protection this company is in shape to offer. An investigation of its affairs and methods of doing business leads us to assure our many readers that this company is in line with the best interests of the profession, and that its personale is above criticism. A doctor holding a contract written by this company can snap his fingers under the nose of his would-be assailant, and sleep as comfortably as though no threat was hanging over his head.

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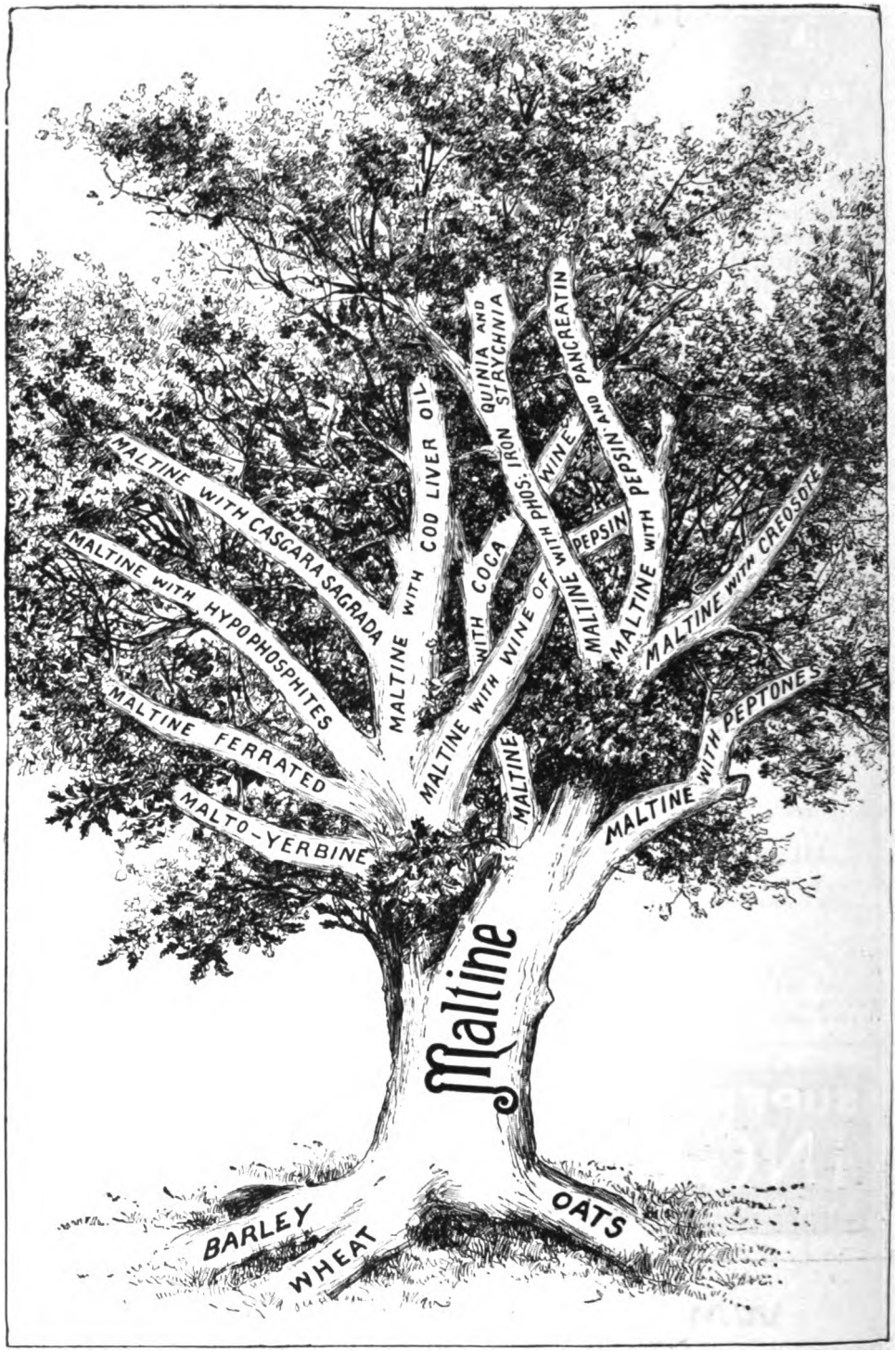

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PRACTICAL THERAPEUTICS.

ERGOAPIOL.—(Smith)— Ergoapiol is the par-excellence of combinations for the treatment of amenorrhoea, dysmenorrhoea and suppressed menstruation. It is a well tried, successful and most meritorious preparation. Its efficacy has been proved and verified by nearly every prominent physician of New York City and many others throughout the entire world. In therapeutic properties it is reliable and positive. Its efficacy is not only derived from this special combination, but particularly from the apiol used in its preparation, and which is a special active preparation that fully and entirely represents apium in the most active form. This apiol, the process and production of which is our exclusive property and discovered by us, is not to be confounded with the inert complex concentration found in the market under this name.

THE NEW TREATMENT OF SYPHILIS WITH BIN-IODIZED OIL.—(By Dr. Chapelle, Paris.)— The "specific bin-iodized oil," recommended by Panas, Dieulafoy, Lancereaux, Brissaud, Fournier and the leading specialists of the diseases of the skin, is a very dilute and unsatisfactory preparation, but a great improvement in the administration of mercury, has been recently made, by utilizing the solubility of nascent mercuric iodide in a strictly neutral aseptic oil, which keeps indefinitely.

This "specific bin-iodized oil" which contains one per cent of BgI_2, has been aptly called Cypridol, (a name which gives no clew to the patient or to those around him as to the nature of the medicament), can be used either hypodermically or taken in capsules.

Cypridol is vastly superior to the usual soluble or insoluble mercurials, the assimilation and subsequent elimination of which is uncertain, while salivation, vomiting and diarrhea are amongst the least of their disadvantages.

Since Ricord's time, insoluble mercurial treatment has been largely adopted on account of the severity of the soluble salts, but their assimilation is slow, irregular and gives rise to considerable trouble in the alimentary canal, even when given in combination with small doses of opium. All disadvantages of this nature, which are inevitable with soluble and insoluble mercural preparations, are avoided with cypridol, which does not affect the stomach or digestive organs and rarely produces salivation even in massive doses. It is conveniently exhibited in capsules of 20 centigrammes each of which represents exactly 1-32nd of a grain of mercuric iodide. One capsule should be taken with the two principal meals daily, and this dose may be increased to five capsules daily, but should not be exceeded, except under special conditions dependent on the susceptibility of the patient to the treatment.

Our experience in the clinics, shows that it is advisable to commence the treatment of the capsules or injections of cypridol (or to alternate their administration) as soon as syphilis is recognized and to continue it for three consecutive years, even if there is an apparent cure after a short time.

During the first three months, the treatment may be suspended eight days every month, during which interval small doses of iodide of potassium, sodium or strontium are given. For the following three months, the cypridol treatment should be administered every alternate fortnight, and after that, eight days of each succeeding month. This radical treatment with cypridol, will insure the patient's permanent cure; it is indispensable, however, to maintain the best hygienic conditions of life.

Frequent, but not too prolonged hot baths; washing, to free the skin from irritation are useful, and care should be taken to keep the buccal cavity exceptionally clean by careful washing and gargling of the throat with boracic acid and chlorate of potassium. An ointment of the same should be used to anoint the genital and anal orifices. The great antiseptic and antizymotic value of cypridol can be utilized in a great number of cases. It constitutes an excellent specific for bacteriological affections or parasites of

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the alimentary canal, the skin and the scalp and is indicated in the treatment of serious affections, fistulas, cold abscesses, white tumors (in hip, knee, ankle), lupus, spina ventosa and other manifestations of tuberculosis. Successful experiments have been made in the Paris hospitals on neoplasms anthrax, furunculosis, paludal intoxication and in the great majority of epidemic diseases.

A very interesting discussion about the origin of gout took place at the International Medical Congress, in Paris, in which the most prominent authorities of Germany, France and England (Goettingen), the disease is caused by an intrusion of uric acid in the tissues. Epstein makes a distinction between two forms of gout. In the first, the disease only effects a few parts of the body, and the individual may attain high age. In the second, more seldom found, the uric acid reached right from the beginning all parts of the body, and is most likely caused by a serious disease of the kidneys. Prof. Le Gendre (Paris) after comparing the different theories about the origin of gout, expressed the opinion that the disease is caused by faulty metabolism. Prof. Duckworth (London) calls the gout a disturbed nutrition causing an imperfect metabolism in certain organs, most likely in the liver and also perhaps in the kidneys. The true indications of gout mnaifest themselves mainly in those joints and tissues which, in consequence of mal-nutrition, or of injuries, lost their force of resistance. The salt crystals deposited in the tissues can be dissolved and eliminated, but are liable to remain permanent in badly nourished parts of the body, causing the most vehement pains. While the authorities come to the conclusion, that the ultimate cause of the origin of uric acid has not as yet been sufficiently explored, they unanimously agreed that of all the uric acid eliminators, Kutnow's Improved Effervescent Powder, composed of the most valuable and curative elements of the most celebrated European Mineral Springs Waters, occupies the first place and is unequalled.

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LARGE TRACT OF CHRONIC BURN-ULCERATION HEALED BY SKIN PROPAGATION IN BLOOD, FROM MINUTE POINTS OF DERMAL TISSUE.

By T. J. Biggs, M. D., Stamford, Conn.

Mary C——, aged 22, came on the 7th of February, 1895, to the surgical ward of Demilt Dispensary, showing a tract of four or five square inches on the right side of her face completely denuded of the skin and superficial fascia, in consequence of a burn which had been unsuccessfully treated by the usual methods in vogue, at two of the city hospitals. The wound extended over the right malar bone, from a point just below the margin of the lower eyelid; downward and sideways over the nose and cheek, a distance of three inches, with an inferior diameter of an inch and a half. The sore was now covered with unhealthy granulations, and exuded smelling mucopurulent discharge. After cleansing the wound with Thiersch solution, its entire surface was cauterized with a 25 per cent etheral solution of pyrozone, and was dressed for three days with wet Thiersch dressing, until healthy granulation became established.

Ten minute points of skin, about one-sixth of an inch in diameter (shrinking to half that size) were then taken from over the right scapula and distributed in an elliptical line about half an inch within the periphery of the wound, leaving a like distance between the opposite sides of the elliptical line. These were protected with strips of sterilized rubber tissue, which does not adhere to the grafts so as to displace them when it is removed. The dressing was of gauze soaked in salt and water, 1 dr. of salt to the pint, which is found to be the application most favorable for the setting of the grafts. Over this, more rubber tissue, cotton and a bandage.

The dressing was removed on the third day, when every graft was found feebly adherent, and the general surface in a healthy condition. After cleansing with Thiersch solution, fresh rubber tissue was applied and the dressing was now made of plain sterilized gauze soaked with bovinine, and covered with oiled muslin, cotton and bandage. On removing this dressing on the second day, the wound was found in a healthy granulating condition, with every graft firmly adherent and healthy in color. The blood dressing was repeated in the same manner every day, for a week, when all the grafts were found to be doubled in diameter and in a promising condition, which continued healthy granulation. Thenceforth, sterilized gauze soaked with bovinine, and nothing else, was applied directly and daily to the surface treated, for seventeen days, to March 9th, making thirty-one days in all from the first appearance of the patient at the dispensary; when the whole diseased tract was found to be perfectly healed and covered with new delicate skin. Dressing was discontinued and patient instructed to wash the part four or five times a day with sterilized water, reporting for observation; and after three days was fully discharged.

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Columbus, O., Nov. 10, 1899.

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State Board of Health of Kentucky.
President's Office.

Louisville, Ky., Nov. 25, 1899.

I have for a long time believed that the physicians of the United States should in some way as a profession organize or have organized for them a protective society to protect them from the base mal-practice suits that often find their way into court. The merits of the "Physicians Guarantee Co." organized in Indiana, have been fully explained to me by Mr. Merritt, the Secretary, and I have therefore become a subscriber to the same

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The Medical Fortnightly

December 25, 1900

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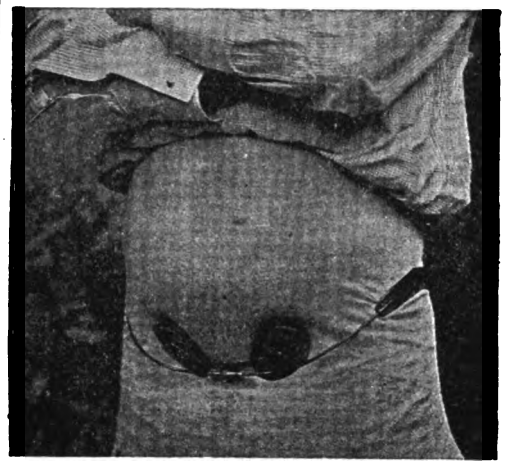

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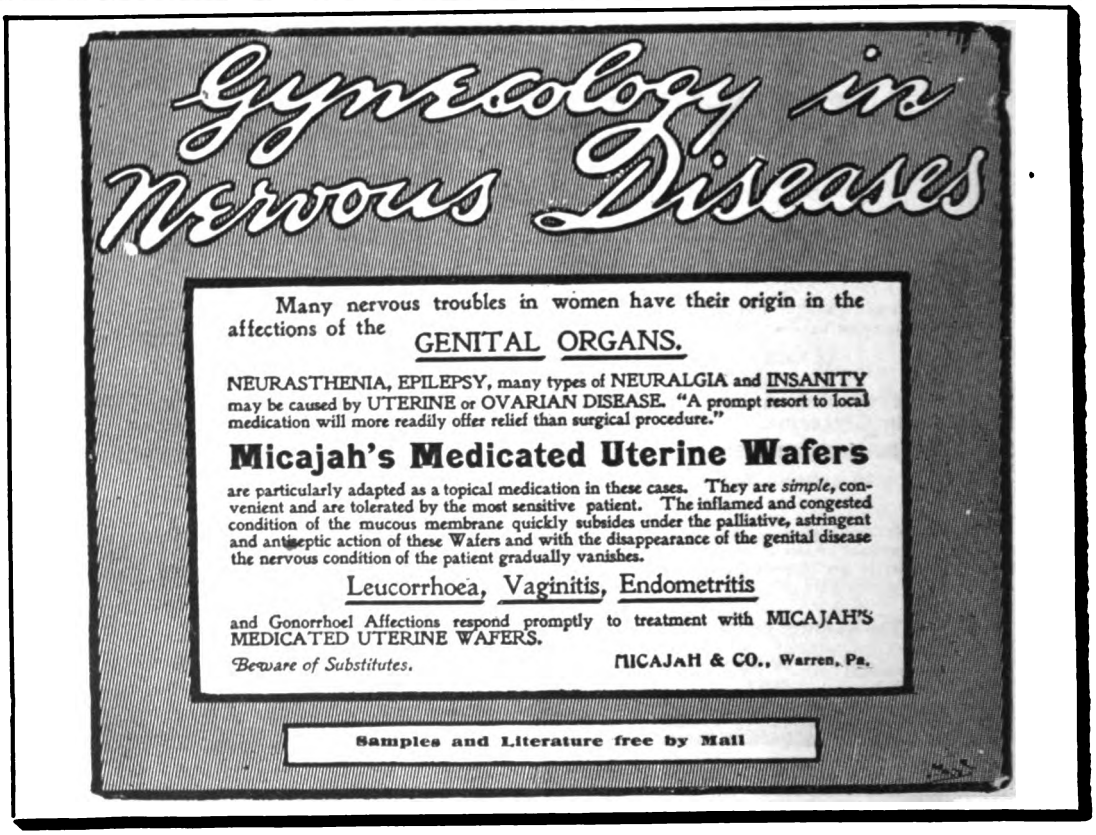
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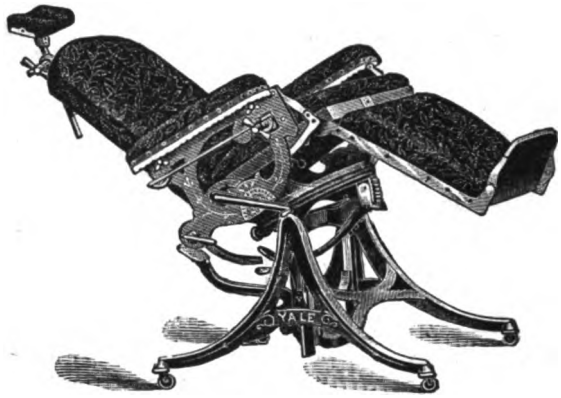

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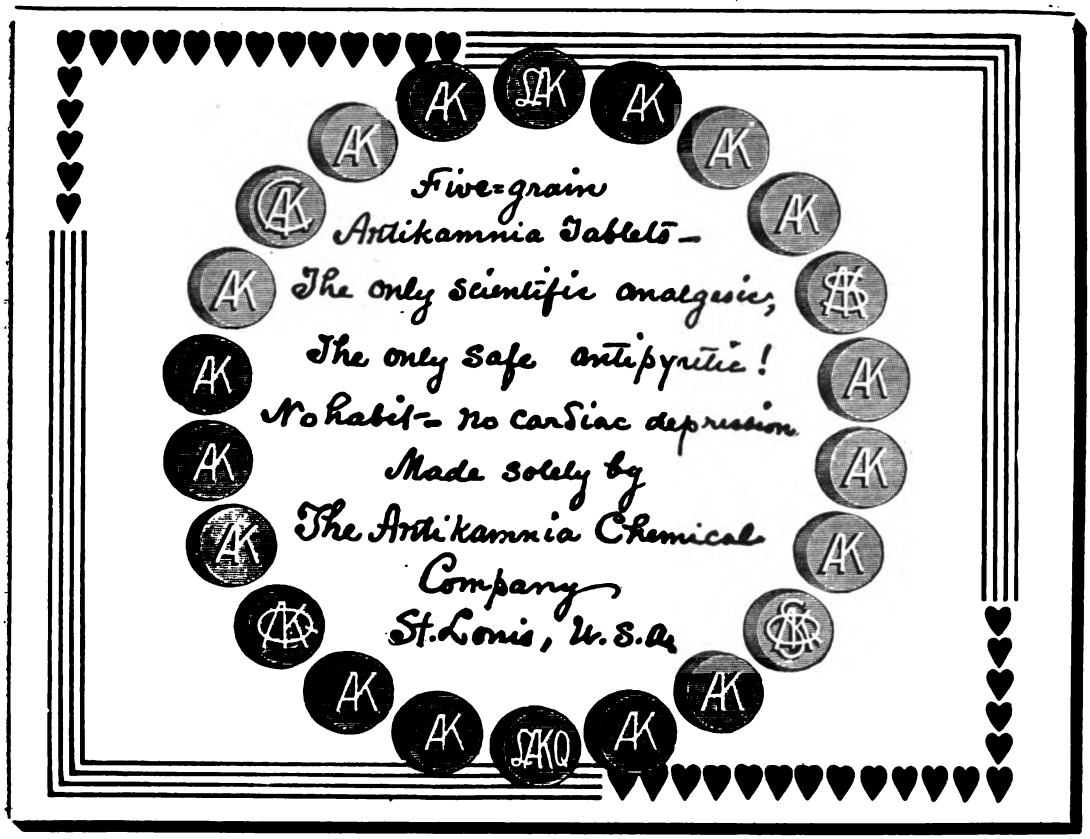

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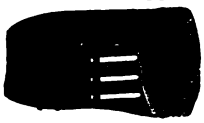

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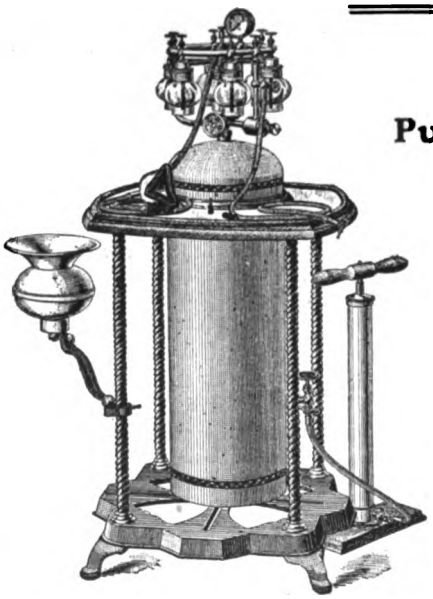

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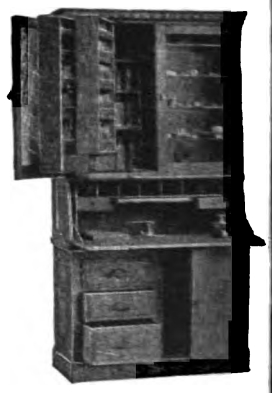

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